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STATE OF NEW YORK

agriculture

DEPARTMENT OF (FARMS) AND MARKETS.

FIRST ANNUAL REPORT

OF THE

DEPARTMENT OF FARMS AND MARKETS

For the Year Ending June 30, 1918

PART II

Report of Division of Agriculture

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STATE OF NEW YORK

Department of Agriculture

To the Honorable the Legislature of the State of New York:

In accordance with the provisions of the statutes relating thereto, I have the honor to transmit herewith the Twenty-sixth Annual Report of the Department of Agriculture of the State of New York, for the year ending September 30, 1918.

CHARLES S. WILSON,
Commissioner of Agriculture.

January 15, 1919.

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STATE OF NEW YORK
DEPARTMENT OF FARMS AND MARKETS
DIVISION OF AGRICULTURE
CHARLES S. WILSON, Commissioner

Bulletin 97

Report of Farmers' Institutes

Year July 1, 1916, to June 30, 1917,
Inclusive

BY
EDWARD VAN ALSTYNE
Director

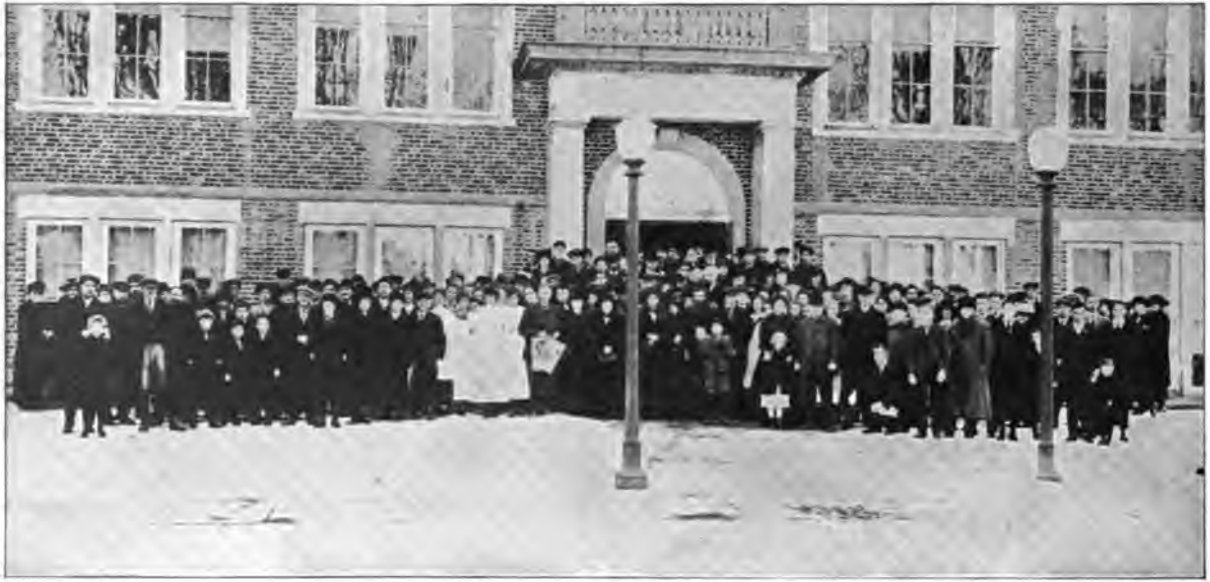

FIG. 1.— FARMERS' INSTITUTE AT WAVERLY.

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REPORT OF FARMERS' INSTITUTES

June 30, 1917.

To Honorable Charles S. Wilson, *Commissioner of Agriculture, Albany, N. Y.:*

My dear Sir.— I herewith submit my annual report for the fiscal year ending June 30, 1917.

The year has been devoid of sensationalism at a time when, owing to war conditions and evident food shortage, sensationalism has been the order of the day. On every hand all sorts and conditions of men — and women — with a most commendable desire to render service have occupied the center of the stage, eager to break a lance in the cause of agriculture, with the result that many impractical schemes have been advanced and much unsound (although well-meant) advice has been promulgated. The effect of this has been to lead astray many not thoroughly indoctrinated in sound agricultural practice, and it has produced in the minds of conservative, well-established farmers a desire to be let alone in order that, unhampered, they may work out their own — and their country's — salvation, even though it be with fear and trembling.

Knowledge of real farm conditions and the mood of mind of the farmers, in view of the situation as above stated, has made it seem to your Director a time when the educational bureau of the Department of Agriculture should keep its feet, as well as its ears, close to the ground, and, while proving all things, hold hard fast to that which scientific research and established practice have proved to be good.

We have, therefore, in all lines of our work endeavored to give such advice and render such assistance to rural folk as would be of most practical, economic value and also be of such a nature as to commend its practice to their good judgment. That we have to a degree accomplished this is indicated by the comments quoted from correspondents' reports on page 170–172.

Particular emphasis has been laid on the importance of maintaining our dairies on a profitable basis, both by platform advice and discussions as to better cows, economical rations, and home-grown feed, as well as by the formation and maintenance of dairy improvement associations. This seems a most psychological time for the latter as an outgrowth of the splendid campaign made by the Dairymen's League in behalf of more equitable prices and their inclination to cooperate in association work. Appreciating the importance of this work, plans have already been perfected for its advancement, and a man is now in the field giving this his constant attention. However, without extra appropriation this will, of necessity, mean an abridgment of our work in other directions.

In view of the scarcity and high price of fertilizers, much stress has been laid on more thorough and better preparation of the soil, and the unwisdom to crop more land than can·be well cared for.

Much work has been done throughout the year in advocating better gardens, both from the institute platform and in sending experts to take up the matter with those especially interested.

The advantages of sheep and swine husbandry have been presented wherever these could be profitably and practically advocated.

The advantages of and explanation of the apple-packing law have been presented wherever the apple is grown.

In every town and hamlet where institutes have been held, the agricultural law has been explained and copies have been left with local merchants. With very few exceptions, this knowledge has evidently been appreciated.

Long before the slogan of conservation of food became popular, my women workers were giving advice and demonstrations along these lines. The list of special women's sessions with attendance will be found on page 147; but, to obtain an adequate idea of the breadth of this work, one must have been an eye witness.

Again, we have been hampered in the extent of the work by lack of funds. We are asked to meet present-day needs and conditions with an appropriation several thousand dollars less than that given ten years ago; yet, with the exception of the follow-up work — most of which has been made unnecessary by the creation of farm bureaus — we are carrying on lines of work then unthought of, as a study of this and previous reports will plainly indicate.

The close relation with the College and Experiment Station has been maintained, although lack of funds to pay expenses of the workers from these institutions when in the field has made it impossible for the institutes to have had the assistance from them that would have been so desirable.

Through the public-spirited efforts of Messrs. Nicoll and Ennis (who paid their own expenses) an exhibit of our dairy improvement work was made at the National Dairy Show at Springfield, Mass., without which New York State would have been unrepresented. Mr. Ennis, on the same terms, represented the institutes at the meeting of the State Dairymen's Association. Your Director personally participated in the meeting of the American Association of Farmers' Institute Workers at Washington, D. C., as did the leader of the women's work, Mrs. Ida S. Harrington, the latter being placed on the executive committee. He also presented the New York plan of dairy improvement work at the National Dairy Show, took part in the State Fruit Growers' meetings at both Rochester and Poughkeepsie, and during Farmers' Week at the State School of Agriculture at Cobleskill. The bureau was represented at Morrisville and Alfred by staff workers.

I would call special attention to the presence of Governor Charles S. Whitman at the Albion Farmers' Days and to the special meeting arranged by my bureau at Oneonta in order that the Governor might meet the farmers in that portion of the state and discuss with them needed and proposed legislation. In both cases the Governor's presence and words were appreciated. A better understanding resulted as to existing needs and conditions and made clear the desire of the chief executive to serve the people without regard to political bias.

Plans are already formulated for a campaign next winter where some of the great fundamentals, such as the state, national, and world-wide food requirements, labor, maximum and minimum price, distribution, and necessary crop production will be taken up.

Detailed account of the year's activities will be found in the pages following. I have endeavored, in this introduction, to emphasize and outline the underlying purposes of work.

Respectfully yours,
EDWARD VAN ALSTYNE,
Director of Farmers' Institutes

THE NORMAL INSTITUTE

The eighteenth Normal Institute was again held at the Agricultural College, as the increased attendance of the farm bureau and extension workers in addition to the institute staff make it impossible for the Experiment Station to care for so large a number.

As will be noted by the program following, a new plan was adopted. In June, a conference was held in the Director's office, and committees were selected to report on the various topics thought desirable to emphasize during the coming season. Shortly after, the chairman of each committee corresponded with the other members and quite generally obtained from them their views. This made it comparatively easy to come to an agreement when the various committees met, whose written reports were submitted and discussed by all those present. As the full text of these reports indicate, a large amount of valuable matter, carefully condensed, afterward was put before the workers — not only at the meeting but in printed form.

This plan generally had the approval of all concerned, and is to be followed the coming year.

The Director would go on record as expressing his appreciation of the assistance of the members of the Experiment Station and College staffs in carrying out the program, and for the courtesy extended by the College in putting at the service of all those attending everything that would advance the purpose of the meeting and the comfort of the workers.

EIGHTEENTH NORMAL INSTITUTE

AT

NEW YORK STATE COLLEGE OF AGRICULTURE

Ithaca, N. Y.

October 26 — 28, 1917

PROGRAM

THURSDAY

Room 122, Forestry Building

9:00 A. M. GREETING.............. Acting Dean A. R. Mann
RESPONSE.............. Director van Alstyne

DAIRYING

9:30 A. M. ECONOMICS
to (Group a)
12:00 M. Chairman............ Dr. Geo. F. Warren (College)
Room 122 College............... Prof. G. N. Lauman
Prof. H. A. Hopper
Prof. Chas. H. Royce
Experiment Station.... Dr. W. H. Jordan
Institute Staff......... D. P. Witter
J. Van Wagenen, jr.
J. A. Ennis
E. R. Minns
Farm Bureau......... Chas. M. Taylor
Floyd S. Barlow
E. R. Eastman

9:30 A. M. VALUE OF MILK AS A FOOD
to (Group b)
12:00 M. Chairman............ Dr. L. L. Van Slyke (Experiment Station)
Room 118 College............... Prof. Flora Rose
Prof. H. E. Ross
Institute Staff......... Mrs. I. S. Harrington
F. E. Bonsteel
Farm Bureau......... Miss S. Pettit
O. F. Ross

9:30 A. M. DISEASES
to (Group c)
12:00 M. Chairman............ Dr. W. L. Williams (College)
Room 126 College............... Dr. V. A. Moore
Experiment Station.... Dr. R. S. Breed
Institute Staff......... Dr. M. Hamilton
Dr. Lucia E. Heaton
Farm Bureau......... C. B. Tillson
E. P. Smith

9:30 A.M. to 12:00 M. Room 8	**STABLE MANAGEMENT** — with particular reference to clean milk and feeding (Group d)	
	Chairman	Prof. W. A. Stocking (College)
	College	Prof. Chas. H. Royce
		Prof. E. S. Savage
	Experiment Station	Geo. A. Smith
	Institute Staff	A. J. Nicoll.
		Dr. E. M. Santee
	Farm Bureau	H. M. Bowen
		W. L. Markham
		H. E. Crouch
		E. R. Zimmer
		E. W. Cleeves

REPORTS OF COMMITTEES

2:00 P. M. VALUE OF MILK AS A FOOD — Doctor Van Slyke
10 minutes — report
10 minutes — discussion

2:20 P. M. DISEASES — Doctor Williams
15 minutes — report
15 minutes — discussion

2:50 P. M. STABLE MANAGEMENT — Professor Stocking
15 minutes — report
15 minutes — discussion

3:20 P. M. ORCHARD PESTS Professor Parrott
Professor Barrus
15 minutes — report
15 minutes — discussion

3:50 P. M. ORCHARD RENOVATION — Professor Hedrick
15 minutes — report
15 minutes — discussion

4:20 P. M. PACKING AND MARKETING — Professor Rees
15 minutes — report
15 minutes — discussion

7:30 P. M. REPORT OF COMMITTEE ON ECONOMICS OF DAIRYING — Dr. Geo. F. Warren
15 minutes — report
30 minutes — discussion

8:15 P. M. ADDRESS — The Dairy Situation in the State
Senator C. W. Wicks, Chairman Joint Legislative Committee on Dairy Products, Live Stock and Poultry

Note. — As Senator Wicks was unable to be present, Senator Morris S. Halliday took his place.

THURSDAY

Room 122

FRUIT

In Charge of Meeting........R. P. McPherson

9:30 A. M.	ORCHARD PESTS	
to	(Group a) Insects	
10:30 A. M.	Chairman	Prof. P. J. Parrott (Experiment Station)
	College	Prof. C. R. Crosby
	Editorial Department	Dr. E. P. Felt
	Institute Staff	Wm. Hotaling
	Farm Bureau	F. H. Lacy
		L. A. Toan
	(Group b) Diseases	
	Chairman	Prof. M. F. Barrus (College)
	Experiment Station	Prof. F. C. Stewart
	Institute Staff	Wm. Hotaling
	Farm Bureau	F. H. Lacy
		L. A. Toan
10:30 A. M.	ORCHARD RENOVATION	
to	Chairman	Prof. U. P. Hedrick (Experiment Station)
11:30 A. M.	Experiment Station	R. D. Anthony
	College	Prof. W. H. Chandler
	Institute Staff	I. C. H. Cook
	Farm Bureau	E. V. Underwood
		W. H. Hook
11:30 A. M.	PACKING AND MARKETING	
to	Chairman	Prof. R. W. Rees (College)
12:30 P. M.	Department Agriculture	B. D. Van Buren
	New York Central R. R.	F. S. Welsh
		E. R. Anderson
	Institute Staff	C. R. White
	Farm Bureau	N. R. Peet
		L. A. Toan

FRIDAY

Room 122

FERTILITY

9:00 A. M.	(Group a) Lime	
to	Chairman	Prof. E. O. Fippin (College)
12:00 M.	College	Prof. L. J. Cross
	Experiment Station	J. F. Barker
	Institute Staff	D. P. Witter
		R. P. McPherson
	Farm Bureau	H. K. Crofoot
	(Group b) Drainage	
	Chairman	Prof. B. B. Robb (College)
	College	Prof. W. W. Warsaw

9:00 A. M.	Institute Staff	C. R. White
to		I. C. H. Cook
12:00 M.		J. Van Wagenen, jr.
	Farm Bureau	C. S. Phelps
		H. B. Rogers
		B. T. Blatchley
		J. H. Phillips
	(Group c) Humus	
	Chairman	H. J. Wilder (United States Department of Agriculture)
	College	Prof. J. L. Stone
		Prof. J. H. Barron
	Experiment Station	Prof. U. P. Hedrick
	Institute Staff	Wm. Hotaling
		E. R. Minns
		J. A. Ennis
	Farm Bureau	T. E. Milliman
		J. G. Curtis
	(Group d) Fertilizers	
	Chairman	Prof. Geo. Cavanaugh (College)
	Experiment Station	Dr. L. L. Van Slyke
	Institute Staff	Jared Van Wagenen, jr.
		A. J. Nicoll
		F. E. Bonsteel
	Farm Bureau	E. H. Forristall
		F. E. Robertson

Room 126

POULTRY

10:00 A. M.	Chairman	Prof. E. W. Benjamin (College)
to	College	W. G. Krum
12:00 M.		L. M. Hurd
	Institute Staff	Irving Rice
		Dr. E. M. Santee
		Wm. Hotaling
		C. R. White
		Mrs. Geo. E. Monroe
	Farm Bureau	W. H. Hook
		J. A. Richardson
		F. C. Smith

Room 122

REPORTS OF COMMITTEES

2:00 P. M.	POULTRY	Professor Benjamin
	15 minutes — report	
	15 minutes — discussion	
2:30 P. M.	LIME	Professor Fippin
	15 minutes — report	
	15 minutes — discussion	

3:00 P. M. DRAINAGE............. PROFESSOR ROBB
15 minutes — report
15 minutes — discussion

3:30 P. M. HUMUS.................. MR. WILDER
15 minutes — report
15 minutes — discussion

4:00 P. M. FERTILIZERS........... PROFESSOR CAVANAUGH
15 minutes — report
15 minutes — discussion

4:30 P. M. CONFERENCE OF ALL INSTITUTE WORKERS — MEN AND WOMEN — In charge of DIRECTOR VAN ALSTYNE

FRIDAY EVENING

HOME ECONOMICS BUILDING

LUNCHEON

Informal Addresses.........	ACTING DEAN A. R. MANN PROF. C. W. WHITNEY PROF. MARTHA VAN RENSSELAER PROF. D. J. CROSBY JARED VAN WAGENEN, JR.

SATURDAY

FORESTRY BUILDING

8:30 A. M. to 10:00 A. M. Room 122,	FARM MANAGEMENT	
	Chairman................	PROF. K. C. LIVERMORE (College)
	College....................	PROF. G. P. SCOVILLE PROF. E. G. MISNER PROF. A. L. THOMPSON
	Institute Staff...........	JARED VAN WAGENEN, JR. A. J. NICOLL D. P. WITTER F. E. BONSTEEL
	Farm Bureau.............	J. R. TEALL H. B. ROGERS A. S. MERCHANT T. E. MILLIMAN R. F. POLLARD
10:00 A. M. to 12:00 M. Room 210	FARM CROPS — HAY, LEGUMES, CORN, POTATOES, BEANS, CABBAGE	
	Chairman................	D. P. WITTER (Institute Staff)
	College....................	PROF. J. H. BARRON PROF. E. V. HARDENBURG PROF. A. E. WILKINSON PROF. J. L. STONE
	Experiment Station........	PROF. F. C. STEWART GEO. A. SMITH

Institute Staff.............	JARED VAN WAGENEN, JR.
	R. P. MCPHERSON
	F. E. BONSTEEL
	E. R. MINNS
	J. A. ENNIS
	I. C. H. COOK
Farm Bureau.............	F. E. ROBERTSON
	C. E. AUSTIN
	J. F. EASTMAN
	T. M. AVERY

ROOM 122

REPORTS OF COMMITTEES

2:00 P. M. FARM MANAGEMENT.. PROFESSOR LIVERMORE
15 minutes — report
15 minutes — discussion

2:30 P. M. FARM CROPS........... MR. WITTER
10 minutes — report
10 minutes — discussion

2:50 P. M. CLOSING WORDS....... DIRECTOR VAN ALSTYNE

WOMEN'S CONFERENCE

ROOM 310, HOME ECONOMICS BUILDING

FRIDAY

9:00 A. M. CONFERENCE OF DIRECTOR VAN ALSTYNE WITH WOMEN WORKERS

10:00 A. M. EXPERIENCES IN FOLLOW-UP WORK
MRS. ORRA P. PHELPS, Farmers' Institute Lecturer

10:30 A. M. DISCUSSION

11:00 A. M. EXPERIENCES IN HEALTH WORK
DR. LUCIA E. HEATON, Farmers' Institute Lecturer

11:30 A. M. DISCUSSION

1:30 P. M. THE FARMER'S WIFE AND THE EXTENSION WORKER
PROF. MARTHA VAN RENSSELAER, State College of Agriculture

2:15 P. M. QUESTIONS AND DISCUSSION

2:30 P. M. NEW LIGHT ON FEEDING PROBLEMS
PROF. FLORA ROSE, State College of Agriculture

3:15 P. M. QUESTIONS AND DISCUSSION

3:30 P. M. CHEMISTRY AND COOKING
PROF. WILDER D. BANCROFT, State College of Agriculture

4:15 P. M. DISCUSSION
ROOM 310, HOME ECONOMICS BUILDING

SATURDAY

9:00 A. M. CAN WE MAKE OUR WORK FOR THE FARM HOMEMAKER MORE PRACTICAL
Round Table led by Mrs. Della A. Jones, Farmers' Institute Lecturer

10:00 A. M. JUNIOR WORK IN HOME ECONOMICS
Miss Claribel Nye, State College of Agriculture

10:30 A. M. DISCUSSION

11:00 A. M. CONVENIENT KITCHENS (Stereopticon)
Prof. Helen Binkerd Young, State College of Agriculture

1:30 P. M. STANDARDS IN WOMEN'S CLOTHING
Miss Bertha Titsworth, State College of Agriculture

2:15 P. M. DISCUSSION

2:30 P. M. THE FARM HOME SURVEY
Mr. E. H. Forristall, Cortland County Farm Bureau Manager

3:00 P. M. DISCUSSION

3:15 P. M. PROGRESS IN WORK FOR WOMEN IN ERIE COUNTY
Miss Sara Pettit, Erie County Farm Bureau

3:45 P. M. DISCUSSION

4:00 P. M. SUGGESTIONS FOR NEXT YEAR'S CONFERENCE

REPORT OF COMMITTEE ON THE FOOD VALUE OF MILK AND MILK PRODUCTS

Presented by

DR. L. L. VAN SLYKE

The subject is treated in six divisions:

1. Food value of milk and milk products — Professor Flora Rose
2. Value of milk in relation to its care in the consumers' home and the use of milk in infant feeding — Miss Pettit
3. Milk and milk products in relation to methods of cooking — Mrs. Harrington
4. Methods of testing milk — Professor H. E. Ross
5. Sanitary milk in relation to food value — O. F. Ross
6. Methods of paying for milk in relation to food value — F. E. Bonsteel

1. FOOD VALUE OF MILK AND MILK PRODUCTS

Considered in all its relations, milk is a cheap food. It is essential in the diet of children. The cost of milk is properly based, not on the quart, but on its nutritive value in comparison with other foods.

A food is valuable, first, as a source of energy; secondly, as a source of building material; and thirdly, for certain growth-promoting substances.

As a source of energy, milk at the usual market prices is not so cheap as most of the cereals. For children, however, it may be regarded as the cheapest available source. In addition to its energy-providing value, milk-sugar is of use also in preventing putrefaction in the process of digestion.

In the matter of special building material, protein costs more in milk than in many other forms of our common foodstuffs; but proteins have different sources, and different values, pound for pound. Milk proteins are more completely used in the body than most other proteins. Therefore, with a dietary rich in milk, less total protein needs to be furnished than in the case of most other proteins that are present in our ordinary foodstuffs.

The salts of milk are also important in connection with its food value. Generally speaking, no other food furnishes calcium or lime at less cost than milk, and this is especially desirable for growing children.

Milk is a cheap source of body-regulating substances. Among such substances may be mentioned acids, salts, flavors, and, in certain relations, carbohydrates, fat, and proteins; but of the chief of these body-regulating substances, the most important is a group of growth-promoting compounds, to which has been given the misapplied name of "vitamins." While we know comparatively little about these substances, their absence is known to prevent normal growth. Their main source in our foods is in milk, eggs, and meat. In butter, the fat contains a soluble substance that is very effective in promoting animal growth. This gives butter a food value very much superior to that of oleomargarine and similar butter substitutes. These compounds are in solution in the liquid part of milk. The animal organism cannot manufacture these materials; they must come from the foods fed to individuals. In the case of cattle, forage crops, such as alfalfa, cabbage leaves, and the like, furnish such growth-promoting substances.

It is believed, with good reason, that the failure of human milk to nourish infants in many cases is due to the fact that the mother fails to obtain sufficient amounts of growth-promoting substances.

Taking the different functions of food into consideration, it can be said in general that the most expensive dietary is the one that excludes milk and its products.

2. VALUE OF CARE OF MILK IN THE CONSUMERS' HOME, AND USE OF MILK IN INFANT FEEDING

In the farm home and in the village home there is apt to be considerable neglect in properly caring for milk after it is delivered. The advantages of delivering in bottles are obvious as compared with the method of delivering in open vessels. As soon as received, milk should be placed in the coolest possible place. Open dishes containing milk should be kept covered. Before removing the cover of a milk bottle, the top should be rinsed, and it is also well to place a tumbler or a special aluminum cup made for the purpose over the top of the bottle after opening.

As general directions, milk should be kept away from flies, also from the presence of odors of all kinds. All utensils holding milk should be thoroughly sterilized and used only for milk. In cleaning vessels, the last operation should be rinsing with hot water and not wiping with a towel. Milk of a doubtful character should be pasteurized in the home; many now advise pasteurizing milk under any and all circumstances, heating it to a temperature of 140 to 155°. At 140°, the minimum time of heating should be 20 minutes. For every degree above 140°, the time may be reduced one minute. Milk should be boiled only under extreme conditions. No preservative should ever be added to the milk.

For infant feeding, fresh, clean, cow's milk is the best if an artificial method is necessary. In advising mothers as to the modification of milk, it is always well either to leave the matter in the hands of a competent physician, or to consult with a physician before giving such advice. Some simple, reliable guide on the subject of infant feeding should also be provided.

3. MILK AND ITS PRODUCTS IN RELATION TO METHODS OF COOKING

Milk is capable of very wide application in preparing food dishes for the table.

1. Cream soups, prepared by combining white sauce (made from milk, fat, flour, and seasoning), with cooked and strained vegetable pulp, are not only simple to prepare, but are very nutritious.

2. White sauce made as above, but with a larger proportion of flour, forms the basis of creamed meats, croquettes, etc.

3. Milk and cream are valuable for salad dressings. A salad dressing in which cream, or milk and butter, are substituted for oil, is especially satisfactory to those who dislike the taste of olive oil. If mayonnaise dressing is modified with equal parts of medium-thick white sauce, the flavor will be much milder, and the cost will be much reduced.

4. Milk forms the basis of all custard mixtures and many other dessert dishes.

5. Sour milk is capable of a wide variety of valuable uses in cooking. Batters and doughs stand up with less flour if mixed

with sour milk than with sweet milk, the result being a tenderer product. If sour milk or cream is used for basting meat in the latter part of cooking, the effect is to make the meat more tender. One difficulty in connection with the use of sour milk in cooking is the inability of the housewife to estimate the degree of acidity, or to appreciate the comparatively wide range of acidity that may be present in sour milk.

6. Cheese can be used to advantage in a great variety of dishes. Cottage cheese, when mixed with peanut butter, chopped fruits, nuts, lettuce, jellies and jams, is very useful in making many kinds of sandwiches. It is also very useful as a part of a salad mixture. The various forms of thickened sour milk and cream are appreciated by many as very nutritious and delicate dishes. Some forms of candy can well be made from sour milk.

Properly employed, milk may be regarded as an absolute essential in economic cooking.

4. METHODS OF TESTING MILK

The one thing to be impressed with reference to the use of the Babcock test is, first, the fact that when properly used it is accurate, and, secondly, that no one should attempt to make the test who has not had some experience and who is not capable of closely following directions. Special emphasis should be laid on the matter of sampling. It should also be emphasized that the function of the cow testing associations is not only to find out the poor cows in the herd but also to act as a check in testing the results of a creamery or factory.

5. SANITARY MILK

The relation between the food value of milk and its sanitary condition is of highest importance. To fulfil its function in nutrition, milk must not only be normal in composition but must be clean, which means that it must be free from all disease-producing germs.

6. THE METHODS OF PAYING FOR MILK

Encouragement should be given in the line of paying for milk on the basis of its food value, as expressed by its chemical composition and its sanitary character.

REPORT OF COMMITTEE ON DISEASES OF DAIRY CATTLE

Presented by

DR. W. L. WILLIAMS

1. Great care should be exercised in attempting to present matters to dairymen relating to the diseases of dairy animals, for the reason that the subject is one of great complexity and most of its phases cannot be presented in such a manner as to be very helpful to the dairyman and free from great peril. However good the subject matter may be, the dairyman may misunderstand and be seriously injured thereby. The presentation of topics relating to diseases of dairy animals should be confined very largely to their causes, their method of spread from animal to animal, and what the dairyman can do to prevent the introduction of such diseases.

In certain cases, such as choke, milk fever, and bloating, dairymen may be profitably instructed regarding measures that they may take until the services of a competent veterinarian can be secured.

We would suggest that the list of these diseases be carefully limited, the work being concentrated upon a few of those that are causing the greatest amount of loss. We would recommend that the list include abortion, white scours, tuberculosis, inflammation of the udder, or garget, anthrax, and some discussion of the question of feeding as related to disease.

Although not within the subject, we would further suggest the disease of hog cholera as being worthy of presentation at the farmers' institutes.

2. These diseases should be presented from the standpoint of their causes; in what manner and form they are rendered more severe; what influence the care, housing, feeding, and breeding have; how these diseases spread from one animal to another; and the best methods known for avoiding them or rendering them as little harmful as possible. Special attention should be drawn to the relation of the diseases of dairy animals to human health, since many of these involve contamination of the milk with disease-producing organisms.

We would emphasize the fact that many of these diseases are incurable, although many of them may usually be prevented, or, once established, may be controlled or ameliorated through intelligent cooperation between the owner and the veterinarian.

3. These matters should be presented only where there is a distinct need and demand therefor. In general, it is advisable, so far as possible, to eliminate extemporaneous addresses, unless they are accompanied by a printed statement covering the essential points in the address. When this has been done and the position of the writer has been clearly and definitely stated, the details may be brought up for discussion. Presented in print, the questions discussed will be left in a definite form, where the views of the author can be freely and intelligently criticized. The printed page is permanent, so that the dairyman may refer to it at any future time as to what the speaker actually said.

It is recommended that the Director of Farmers' Institutes have prepared for the use of farmers' institute workers a series of brief articles on the various diseases of dairy animals included in the above list, and that these be prepared by the highest authorities available and put in proper form for distribution at the farmers' institutes, as well as by mail, to serve as a basis for discussion and for replying to questions.

Great care should be exercised in the selection of lecturers for discussing the diseases of dairy animals, only veterinarians of the highest type being chosen. They should have an intimate knowledge of the subjects that they are to present and should be thoroughly competent to present them in a thoroughly intelligent manner.

From the standpoint of clean milk, the diseases of the udder should be extensively dwelt upon, especially the character of the bacteria ordinarily found in garget, because of their relations to the public health. Garget, or inflamation of the udder, is one of such diseases that cannot usually be successfully treated, but by proper precautions may be prevented.

It is very important that all skim milk and whey should be pasteurized. This is necessary because of danger from contagious abortion, as well as to stop the spread of tuberculosis in calves and pigs fed on such by-products. This is important both from the standpoint of economy for the dairyman and from that of human health. We can never have clean milk until we have healthy cows, and the only way to secure the latter is to take healthy calves as soon as they are born and guard their health as long as they live.

The subject of contagious abortion should be emphasized and the most modern plan for its control brought out, placing before the dairyman the fundamental facts regarding the nature of the disease. There is no cheap and quick cure. The dairymen may greatly lessen the ravages of the disease by careful attention to cattle of all ages and of both sexes. There is an intimate relationship or identity between abortion, sterility, retained afterbirth, and the scours and pneumonia of calves. These can be controlled only by constant and intelligent care.

REPORT OF COMMITTEE ON STABLE MANAGEMENT

Presented by

PROFESSOR W. A. STOCKING

STABLE CONSTRUCTION

1. Stables should be light and well ventilated, with approximately 500 cubic feet of air space and 4 square feet of glass per cow. The ventilating system should provide for a constant change of air. Wooden flues are preferable to metal.
2. Floors and side walls, to a height of 3 feet, should preferably be of insulated concrete; upper side walls and ceiling of plaster or wood, with smooth surfaces. Wood capping on concrete floor under cows is not objectionable if laid in such a way as to be water-tight.
3. Ceilings should not be over 8 feet high.
4. The stable fittings should be preferably of iron.
5. There should be facilities for watering cows in the stable, either by manger or automatic bucket. If watered in the yard, water should be above freezing temperature.
6. Methods of remodeling old stables is important, but is an individual problem with each barn.

HEALTH OF CATTLE

1. During cold weather the stable temperature should be maintained between 45 and 55 degrees.

2. It is recommended that farmers consult a good veterinarian regarding the health of the herd, having regular inspection for tuberculosis during fall and a general inspection in spring. Special attention should be given to the presence of abortion and methods of control.

EFFICIENT AND ECONOMICAL PRODUCTION

Under this heading it is important to consider the following points:

1. Quality and efficiency of cows — milk weighed at each milking.
2. Conservation of labor.
    - (a) Stables compact, with cows close together
    - (b) Feed close at hand
    - (c) Silo near stables
    - (d) Hay and roughage in near-by lofts
    - (e) Bedding close to stables
3. Special emphasis to be placed on economical feeding.
4. Daily program to be followed in stable management.
    - (a) Water
    - (b) Clean udders
    - (c) Milk
    - (d) Feed silage
    - (e) Feed grain
    - (f) Feed hay
    - (g) Clean stables
    - (h) Water
    - (i) Feed roughage
    - (j) Clean udders
    - (k) Milk
    - (l) Feed silage
    - (m) Feed grain
    - (n) Water
    - (o) Feed hay
    - (p) Clean stables
5. Milking machines, if properly used, are practical, both from the standpoint of health of cow and production.

FEEDING

1. At least one-half of grain ration shall be high protein feeds containing at least 20 per cent of total protein.

2. At least one-third of grain mixture shall be made of bulky feeds, like wheat bran and distillers' dried grains.

3. The grain mixture shall not contain more than 40 per cent of gluten feed or cottonseed meal or combination of both.

4. The use of legume hay and silage must be emphasized.

5. Emphasis must be placed upon the use of succulence and variety in ration. If silage is not available, succulence may be obtained by the use of malt sprouts or dried beet pulp or brewers' dried grains, soaked with all the water they will take up.

6. The use of ready-mixed manufactured grain rations should be discouraged, unless the farmer knows exactly what he is buying and is sure that he is getting as much digestible material for one dollar as he can get in his home-mixed ration.

7. By liberal feeding from birth, calves and young stock should be fed to maintain constant growth to maturity.

8. Farmers should buy their grains on the basis of total digestible nutrients.

CONDITIONS FOR PRODUCTION OF CLEAN MILK

1. Clean, healthy cows — veterinary supervision.
2. Clean stables.
3. Clean, healthy milkers — medical supervision.
4. The importance of clean utensils, thoroughly sterilized, should be especially emphasized.
5. Proper platform, gutter, and bedding to keep cows dry.
6. Cows kept free from flies, lice, and itch to prevent switching of tail at milking time.
7. Cows brushed daily and allowed to run in yard.
8. Clip long hair from udder.
9. Stable air free from dust at milking time.
10. Dirty cows to be washed.
11. Udder and flank to be wiped with damp cloth.
12. Stanchion fitted with neck chain to prevent cows from lying down after being cleaned.
13. Use of small-top milk pail.
14. Milk removed immediately from stables.
15. Milk strained and cooled immediately.
16. Emphasize fact that clean milk can be produced without expensive stables.
17. Emphasize fundamental principles for producing clean milk.
18. The use of the dairy score card should be explained and demonstrated.

19. Where milking machines are used, clean milk with low germ content can be secured if the machines are properly cleaned and sterilized.

REPORT OF COMMITTEE ON INJURIOUS INSECTS

Presented by

PROFESSOR P. J. PARROTT

CARROT RUST FLY

1. The carrot rust fly (*Psila rosae*), a comparatively new celery pest, has appeared in serious numbers in various parts of the state. It is now widely distributed and has been particularly destructive in the vicinity of Rochester. Unfortunately, no method of controlling this insect has been devised applicable to the conditions under which its food plants are grown in New York. In spite of this we venture to make the following suggestions, since the pest has become a serious problem in certain localities and the growers are very anxious to find a satisfactory remedy as soon as possible.

In view of the fact that the flies feed for some time before laying their eggs, it would seem possible to kill them with a sweetened poison bait, a method which has proved of great value in the control of certain fruit flies and which is said to have been satisfactorily used for the control of the onion maggot. Preliminary tests of this method, however, have not given satisfactory results. This may be due in part to the very wet season, and the method should be thoroughly tested before it is discarded. In the tests a poisoned bait was made according to the following formula:

Sodium arsenite	5 grams
Molasses	1 pint
Water	1 gallon.

This liquid is sprinkled over the ground by means of a broom dipped in a pail. It is not desirable that the bait be applied to the plants themselves as it is liable to cause burning. The first application should be made as soon as the first flies begin to appear. The application should be repeated every four or five days, or after each rain.

Another substance worthy of trial is carbolic acid emulsion. This has been used with more or less success against the cabbage root-maggot. The emulsion made by the following formula is diluted with thirty parts of water and should be applied in a small stream along the row soon after the eggs have been laid:

Soap	1 pound
Water	1 gallon
Carbolic acid	½ gallon.

APPLE RED BUGS

2. The apple red bugs (*H. malinus* and *L. mendax*) are causing great losses in apple orchards. The most effective means of protecting the crop from these insects is spraying with nicotine solution, 40 per cent, just before blossoming, at the rate of one pint to one hundred gallons of water. The nicotine preparation may be combined with lime-sulphur as applied at this time for the prevention of early infections of apple scab. If this combination is not made and the nicotine solution is applied as a special treatment, it is advised that four or five pounds of soap be added in order to increase the spreading and sticking properties of the mixture. Successful control can only be obtained by very thorough spraying. If, following the dropping of the blossoms, destructive numbers of the insects are observed attacking the young fruits, repeat the treatment with nicotine solution, combining it with lime-sulphur and arsenate of lead as employed against the codling moth and apple scab.

APPLE MAGGOT

3. The apple maggot (*Rhagoletis pomonella*) was again very abundant in certain areas of this state, and was especially destructive to summer and early fall varieties of apples. For the prevention of losses by this pest it is recommended that chief reliance be placed on good orchard practices, as cultivation, spraying by the common schedule, and destruction of windfalls at intervals of a few days. At the time of the emergence of the flies, which occurs during July, apply arsenate of lead in the proportions of two to three pounds to fifty gallons of water, covering both fruit and foliage. The addition of one gallon of molasses to

this mixture has been recommended. It may be of value in attracting the flies, and, since it can do no harm, it is probably worth while.

CODLING MOTH

4. The codling moth (*Carpocapsa pomonella*) continues to hold the serious attention of apple growers because of losses to crops by "side-injury." The data so far obtained show that the largest reduction in losses is secured by an application of an arsenical poison as petals drop. It is also to be noted that the protection derived from a treatment during the current season is not appreciable, but reduction in extent of side-injury becomes most marked by the systematic spraying of apple trees each year. Aside from regularity in giving treatment, growers suffering from this form of damage to fruit should be urged to use the spraying mixture in liberal amounts and to spray carefully, endeavoring to wet each calyx cup before the calyx lobes close.

CABBAGE MAGGOT

5. The cabbage maggot (*Phorbia brassicae*). The government crop reports show that during the past season there was a great decrease in acreage as well as in the relative yields of late cabbage in New York as compared with the preceding year. Several factors were responsible for this shrinkage, such as low prices during 1915, poor growth of seedlings in seed-beds, and unsatisfactory weather and soil conditions following transplanting. In Ontario, Seneca, Yates, and Wayne counties, which are reported to have grown nearly one-half of the supply of cabbage for the entire country, the cabbage maggot was very destructive in seed-beds. Judged by the number and condition of plants, seed-beds generally were a great disappointment to their owners, who were oftentimes forced to plant a smaller acreage than originally intended. Manufacturers of sauerkraut report that, while the cabbage maggot was not solely responsible, it was the principal factor in the low yield of cabbage. These losses suggest the importance of growing seedlings under screening. The production of plants by this method results in economy of seed, which saving, it is claimed, will pay for the cheesecloth and the frame.

In addition to freedom from maggots, the conditions in the screened beds are more congenial to the growth of the seedlings so that the plants are usually of suitable size by the time it is desirable to transplant them in the field.

ROSY APHIS

6. The rosy aphis (*Aphis sorbi*). As previously indicated, experiments point to the destruction of the newly-hatched aphides on the opening buds as the most important step for the prevention of injuries by the rosy aphis. If spraying is carefully done few of the insects survive the treatment to curl the leaves or dwarf the fruits. Experience shows that the protection of apple trees by this means is not difficult of demonstration. However, present evidence indicates that comparatively few orchardists will modify their spraying practices to secure better protection from this insect. There are several reasons that account for their failure to do so. First of all, the pest varies in importance from year to year in individual orchards. During most seasons the extent of damage by the insects is not large, and spraying to control it would cost as much as the fruit that is threatened is worth. While most plantings sustain great damage in occasional years, the orchard that is annually subject to extreme injury is exceptional. Such experiences tend to discourage systematic spraying; yet there is the outstanding fact that if one does not spray his trees systematically he is likely to sustain severe losses during certain years; and the losses in one season may amount to greater sums than are expended in spraying for several years. Then again, most growers who undertake to spray for the rosy aphis usually fall far short of the standards required to do effective work against the insect. Literally speaking, the trees should be drenched with the spraying mixture so that not a single bud escapes treatment. As a rule, the grower does not do thorough work, uses too little of the spraying mixture, and does not exercise enough pains to wet all of the bearing wood.

In view of these facts, we offer the suggestion to lecturers at farmers' institutes and managers of farm bureaus that instead of recommending growers to spray their entire plantings they encourage orchardists to carry on a spraying experiment. In making such a test select a small portion of an orchard, as one or two short rows, or a plat of ten to twenty trees. For the sake of economy in time and materials, the trees should not be too large, preferably about twenty years of age, and of a susceptible variety, as Greening, Rome, Northern Spy, or Twenty Ounce. For the spraying mixture apply either lime-sulphur and nicotine solution or nicotine solution and soap under the conditions that are recommended. The test is both simple and inexpensive. If properly carried out none other is so well calculated to direct an orchardist along proper lines, since it will enable him to determine to what extent the rosy aphis reduces his yields, and also to ascertain if the protection obtained pays for the additional expense of spraying materials to combat this insect. The results from such a test ought to demonstrate to the grower the practicability of undertaking larger operations.

CHERRY APHIS

7. The cherry aphis (*Myzus cerasi*). This insect is attracting considerable attention in some large plantings of sweet cherries. The damage caused by the insect varies from the dwarfing of the fruit to the destruction of the leaves and terminal growth. A severe attack produces an uneven ripening of the crop, while the honeydew detracts from the appearance of the cherries and is, in addition, the cause of considerable discomfort to pickers.

Experiments that have been in progress for two years indicate that the most satisfactory treatment to combat the pest is to apply a contact spray, preferably lime-sulphur combined with nicotine solution, or nicotine solution and soap, when the buds are almost opened. The effect of this operation is entirely to free the trees of this pest, or greatly to reduce the numbers of centers of infestation. After blossoming, the trees should be examined at intervals of a week for infested leaf-clusters, which should be removed and destroyed. For this work a pruning hook is a most serviceable tool.

DELAYED DORMANT SPRAYING

8. Delayed dormant spraying. A question commonly asked by fruit growers is, "How late in the spring is it safe to apply lime-sulphur solution at winter strength?" The questioner has obvi-

ously two considerations in mind: First, the control of the San José scale, or the blister-mite, or both. In general, growers have not been taught that the so-called dormant application, if made somewhat later in the season than customary, may be employed with good results against other orchard pests. Secondly, the orchardist desires to know the period when he may apply strong mixtures of lime-sulphur without danger of injury to the expanding buds. In other words, what is the stage of development of the buds when it is not safe to spray with such preparations?

As regards the matter of safeness, growers do not generally understand that fruit trees may be sprayed much later in the spring than is the usual practice. In the case of pears, the limit of safety is reached when the cluster buds are beginning to separate; with apple trees, when the leaves of the more advanced buds are projecting from one-fourth to one-half an inch. Some growers, however, spray as late as when blossoms are about ready to open.

With respect to the advisability of spraying when buds are in such advanced stages of development, there is good reason for encouraging such a practice because of the greater number of pests that may be affected by the deferred dormant application. In pear orchards where blister-mite need not be considered, spraying of the trees under the conditions indicated will not only control the San José scale but it will also greatly reduce the numbers of the psylla, since the eggs of this pest are quite sensitive to lime-sulphur. With apple trees, the advantages from late spraying are more marked. Aside from combating the San José scale, it is possible, with the addition of nicotine solution to lime-sulphur, to destroy several species of aphides, or by the addition of arsenate of lead to deal an effective blow against various leaf-eating caterpillars. Moreover, we are learning that such an application of lime-sulphur may be of considerable value against apple scab. Spraying is at best an expensive and time-consuming operation, and it is distinctly to the advantage of the grower that each application exert its maximum of efficiency. A step in the right direction is, we believe, a better appreciation of the advantages from applying strong mixtures of lime-sulphur somewhat later in the spring than is the common practice.

REPORT OF THE COMMITTEE ON FRUIT DISEASES

Presented by

PROFESSOR F. C. STEWART

SPRAYING SCHEDULE FOR APPLES

The complete spraying schedule agreed upon calls for four applications.

1. When the new leaves are one-fourth to one-half inch long (the "delayed dormant application").
2. Immediately after the dropping of the petals.
3. From two to three weeks after No. 2.
4. About the middle of July.

It should be pointed out that 1 and 2 are the most important applications, to be made in all cases; but that the advisability of making 3 and 4 depends upon weather conditions, susceptibility of the variety to scab, location of the orchard, etc.

While the delayed dormant application here advised may not be so effective against scab as is the so-called "pre-blossom spray," it is believed that the difference is not sufficiently great on the average to warrant the expense of a second application just before the blossoms open. Two members of the committee believe, however, that whenever there is any probability that weather conditions will prevail to make infection possible, the pre-blossom application should be made.

PRESENT STATUS OF THE SULPHUR-DUST TREATMENT FOR APPLES

It is probable that the utility of the sulphur-dust treatment has been overestimated. It is still in the experimental stage, and is worthy of further trial. Experiments and observations of the past season indicate that it is not quite so efficient as is the liquid spray in the control of scab. It cannot wholly take the place of the liquid spray, because it is not effective in the control of San José scale, aphis, and red bug. At present, it is to be recommended as a supplement to the liquid spray; that is, for the use of orchardists who have a larger acreage than they can handle properly in times of stress with their equipment of liquid sprayers.

SPRAY INJURY TO APPLE FOLIAGE

During the past season, considerable spray injury has resulted from the use of lime-sulphur and arsenate of lead in the spraying of apples. Heretofore, it has been held that such injury occurs only on leaves attacked by apple scab or blemished in some other way; but last spring perfect leaves free from scab sometimes showed spray injury. The probable explanation of this is that apple foliage was unusually tender, owing to protracted wet, cloudy weather.

SPOTTING OF APPLES

There has been much complaint the past season of small dark specks and brown spots on apples. At least two distinct diseases have been involved in this:

1. Fruit pit or stippin, a non-parasitic disease caused by fluctuation in the water supply. This disease is imperfectly understood and practically uncontrollable. In its typical form it appears as brown, sunken spots with pockets of dead, brown, corky tissue beneath the skin.
2. Fruit spot, a fungus disease, which is controllable by spraying as for scab. In this the spots are usually smaller and shallower than in fruit pit.

It is possible that in some cases the spotting was due to the puncture of insects and in others to other fungi. It should be understood that knowledge concerning these apple spot troubles is very imperfect, and that frequently they are very difficult to diagnose.

SOOTY BLOTCH AND FLY SPECK

These two diseases are caused by the same fungus. They occur chiefly in damp situations where the air circulation is poor; for example, in weedy, unpruned, or thickly planted orchards — especially in orchards closely surrounded by hills or windbreaks. The first and most important thing to be done in the way of treatment is to secure good air circulation in the orchard. Spraying as for scab is helpful. Probably the application about the middle of July is the most important one.

FALL SPRAYING FOR PEACH LEAF CURL

The fall spraying of peaches for leaf curl should be encouraged. Experiments made by the Cornell Station indicate that fall spraying is as effective as spring spraying. Such being the case, it is advisable to do the spraying in the fall, when the press of work is not so great as in the spring.

REPORT OF COMMITTEE ON RENOVATION OF ORCHARDS

Presented by

PROFESSOR U. P. HEDRICK

CAUSES OF WEARING OUT

1. *Old age.* With orchard fruit old age is a relative term. In general, longevity depends on the fruit, the variety, and the environment. The profitable bearing age of the several fruits is longest in the apple, followed in order by the pear, cherry, plum, and lastly the peach. Some varieties live longer than others. Peaches live from fifteen to twenty years; plums, twenty to thirty; cherries, thirty to forty; pears and apples, fifty to eighty. Many orchards are too old to be worth renovation.

2. *Climate.* A deleterious change in climate is often assigned as a reason for the deterioration of orchards. Records show that climate in this region changes but little, though it does swing slightly from hot to cold and from wet to dry in cycles of a decade or less. Such changes do not greatly affect an apple or a pear generation but might shorten and reduce the value of a peach generation. The slight changes in climate do not greatly affect orchards.

3. *Insects and fungi.* Insects and fungi contribute much to the wearing out of orchards. They are continually increasing in kinds and in individuals. The kinds increase by importation from foreign countries and because, as natural food is destroyed by the destruction of wild vegetation, pests are driven to cultivated plants. The individuals of the innumerable kinds are increasing because orchard areas are becoming more closely united; hence, as disease spreads faster in a city than in the country, pests multiply as their feeding grounds become more compact.

4. *Lack of care.* Many orchards are worn out because they have been neglected. It is the exception to find an orchard that has been given the care usually given to other cultivated plants. The orchard is too often cared for as a whole; consideration is given to tree and tree alike, rather than to the individual tree in accordance with particular needs. To keep trees from wearing out they should be cared for assiduously in many particulars, and as individuals rather than in mass.

5. *Depletion of soil fertility.* The food account in many orchards no doubt has been overdrawn.

RENEWING WORN-OUT ORCHARDS

1. *Reduce the number of trees if they stand too thickly.* There is always a tendency to plant too many trees to the acre, with the result that the orchard deteriorates from overcrowding. Usually the first step in renovating a worn-out orchard is to cut down a part of the trees. Before branches begin to touch, trees should be thinned.

2. *Prune thoroughly.* But few worn-out orchards have been well pruned, a condition manifested by unsymmetrical heads, decaying branches, too many branches, and a great growth of water sprouts. Such orchards should be pruned to correct the defects mentioned; to let in light and air; to facilitate orchard operations; and, with an additional cutting back of some good wood, to increase the vigor of the tree. Prune in late winter; make the wound as near the tree trunk as possible and parallel with it; cover large wounds with lead paint; have an ideal in mind as to the shape of the tree desired, and prune strong-growing varieties lightly and weak-growing ones severely.

3. *Drain wet lands.* Many orchards are on soils too wet to grow good trees. Such soils should be drained, and all wet, sour spots so commonly found in old orchards should receive attention.

4. *Enrich the soil.* Possibly the worn-out orchard needs more food. Stable manure or cover crops and potash and phosphoric acid in varying combinations to suit different conditions, are the chief essentials for feeding worn-out orchards. Nitrogen is best supplied through cover-crop legumes. Stable manure may be

needed to improve the physical conditions of the soil as well as to supply food. Fertilizers should be varied in accordance with the soil, kind of fruit, variety, and age and vigor of the trees. Apply fertilizers before growth starts in the spring and work them in with a cultivator.

6. *Put in practice a system of spraying.* Apply the seasonal sprayings for the several fruits.

7. *Plow each spring and cultivate through the growing season.* Worn-out orchards are usually in sod, and no matter what the system of tillage advocated may be, the breaking up of the sod and subsequent tilling for several seasons must hold first place as a means of renovating old orchards. Plow — as shallow as possible at the first attempt — in the spring, and use the cultivator several times during the season so that sunlight and air may enter in; that bacteria may live and work; that moisture may be conserved; that grass cannot take the cream of the land; and that the storehouses of potash and phosphoric acid may be unlocked.

8. *Make yearly uses of cover crops.* The soil of worn-out orchards is usually in poor physical condition and the most expedient way of improving it is by plowing under cover crops. Cover crops, if legumes, also add nitrogen, and all add humus to the soil. Rotate legumes, grains, and cruciferous plants in accordance with the needs of the land and of the fruit. Sow cover crops when the trees have made the proper season's growth and plow under the following spring.

9. *Study the trees, the soil, and the particular conditions of each orchard.* No two worn-out orchards have reached the condition through the same causes; hence, no two require the same treatment in renovating. A special study must be made of each particular case to determine the treatment needed.

RENOVATION OF VINEYARDS

The fact that the average yield for the state is in the neighborhood of one ton to the acre shows that many vineyards are not profitable. Some of these are on land not adapted to grape growing and the sooner such vineyards are discarded, the better for the grower and for the industry.

The average yield in the Keuka region is lower than in the Chautauqua grape belt. This is partly due to the topography of the land, the soil, and the varieties grown. Outside of these the greatest factor in the low yield is the failure to give proper cultivation. Vineyards, where proper cultivation is neglected, frequently drop their leaves before either fruit or wood is well matured, thus causing a loss for the current year and a decreased crop for the following season.

In many cases, in order to secure proper cultivation a reorganization of the farm business is necessary. Grape growing, instead of being the sole business, should be one phase of a general farm business. In this way team labor can be had for the grape at a minimum expense. It may be best to combine hay farming on the hills with grape growing on the slopes.

In the Chautauqua region better cultivation is not of such prime importance, although even here it is frequently neglected. Better drainage and spraying will help, but the chief need is wider diversity. Growing grapes alone is seldom economical. Many growers are realizing this and truck crops are being grown more and more. In this way, while the vineyard does not yield more, the cost of growing is decreased and a greater profit secured.

What shall we say of the use of fertilizers and cover crops in renovating the vineyard? The grape grows well on land too poor for field crops. Probably for this reason it responds very slowly to fertilizers and cover crops. The use of these for eight years on the experimental vineyards at Fredonia has not as yet given sufficient returns to justify the expense. In spite of this we do not feel in any way justified in advocating the abandoning of these standard means of increasing fertility, especially in vineyards where the yield is below the average for the community and the soil is in poor tilth. We should, however, use fertilizer, with the exception of nitrogen, for its effect on the cover crop rather than on the vineyard.

REPORT OF COMMITTEE ON PACKING AND MARKETING

Presented by

PROFESSOR R. W. REES

THE APPLE GRADING LAW

The educational campaign regarding the apple grading law has been carried on for the last two seasons, and the law seems to be well understood by the large growers. There are, however, a number of smaller growers unfamiliar with the law and its interpretation, making it probably worthy of mention in lecture and demonstration work.

In lecture work it would seem advisable to explain the essential features of the law, namely:

1. Define each of the three grades, pointing out in detail how each differs from the others. Attention should be called to the fact that fruit packed as ungraded is not a New York Standard grade.
2. Explain the marks required by law.
3. Explain the terms of the law, as " closed package," " properly packed," " normal shape," " good color," " practically free," etc.

The State Department of Agriculture Circular No. 118 covers the subject plainly and concisely.

In connection with the lectures it would be well to use fruit to illustrate each of the grades and stencils showing the required marks.

Packing

The work in packing should be handled by demonstration whenever possible. In connection with packing demonstrations, the law may be well explained. It seems advisable to place particular emphasis on the following points:

1. Apples for facing should be uniform in size, color, shape, and should be tightly placed.
2. In filling and racking, the fruit should be fitted closely so that undue pressure will not be necessary to tighten the pack.
3. The tail should be right for the height and well leveled to give even pressure.

4. Call attention to proper pressing and nailing to prevent injury to fruit.

5. The package should be properly marked before it is packed or after it has been closed.

MECHANICAL SIZING MACHINES

Accurate sizing is always of importance, but is particularly so now, since the law requires the minimum size of fruit to be stated on the package. The price of a given grade, other factors being equal, is regulated by the minimum size of fruit in the package. The mechanical sizer seems to be the only practical and economical means of preventing a number of three-inch or larger apples going in a pack that must be marked "min. size 2½ in." on account of a few apples of the smaller size. The mechanical sizer will give greater assurance of the minimum size than can otherwise be secured. There are several sizers on the markets at reasonable prices that give satisfactory results.

MARKETING

With the physical growth of the country, our problems of transportation and marketing have grown in like proportion, but on the whole, conditions are more favorable than ever before. The large number of channels of trade are somewhat bewildering and hard to judge, even by the experienced. The outlets through which most of our fruit passes from the producer to the consumer may be grouped as follows:

1. *Direct sales to consumer.* Only a small proportion of our crop can be so handled, but in some cases, the system may be handled advantageously. The following are the most common forms of direct sales:

    a. Direct delivery by truck or wagon to consumer. Of course, this is local in extent, and a somewhat costly system.

    b. The public market in village or city is also local in extent and costly in time.

    c. Parcel post and express delivery are growing in importance. As a rule, these systems of delivery are too costly for any but quality fruit. One of the principal problems in connection with mail or express business is to secure a satisfactory list of consumers and to make collections.

d. Direct sales to canneries, evaporators, cider mills, and factories are usually at low price, but make an outlet for poor goods, keeping low grades off the open markets.

2. *Local country buyers.* In many communities we have a local buyer who buys up fruit, but does not cover a large territory. In most cases the grower is acquainted with the buyer and knows his moral and financial standing.

3. *The traveling buyer* is frequently a free lance, buying at the lowest figure and selling where he can sell to the best advantage. It is usually well to investigate the financial standing of such dealers.

4. *Operators.* Large operators send buyers into producing sections to buy fruit on the tree, picked and unpacked, or packed. The operators distribute through branch houses or through the general channels of trade. A large percentage of the crop is sold in this manner in a great many sections.

5. *The private exchange.* Private exchanges are usually stock companies that act primarily as brokers or distributing agents on a brokerage basis.

6. *Commission merchants.* Commission merchants handle a large volume of business both in car lots and less than car lots. In times past there have been many abuses; but, as a rule, the commission merchant is as honest as the average business man, or producer. Commission houses are frequently the only available outlet for unstandardized goods in less than car lots.

7. *The jobber.* The jobber is a merchant at the point of distribution who buys from the wholesaler and sells to the retailer. He makes quick turnovers, which is very important in handling perishable goods.

8. *The auction.* The auction system of selling takes care of a much greater volume of business than we frequently realize, and promises a great increase in the future. If in competent hands and the bidding is on a strictly competitive basis, the auction is an important channel of trade.

The above notes outline in a general way the channels of trade through which our fruit must travel from producer to consumer. The problem is to determine which channel or channels are best suited to the particular case in hand.

COOPERATIVE ASSOCIATIONS AND PACKING HOUSES

All will agree to the theoretical benefits of cooperative packing and marketing, whether or not we agree as to its practicability in all districts. There are, without doubt, a number of localities within the state where a cooperative organization with central packing houses could be established on a sound foundation, and with great benefit to the individual growers. No matter what our system of marketing, careful standardization of product will do much toward securing better prices. Our state apple grading and packing law is doing much to improve the standards, but it takes more than law to make a perfect standard for a given locality. So far as we know, the only way we can get sufficient uniformity to establish a market brand that will hold from year to year, is through the central packing house where the whole pack is under the direction of one man.

The more important features governing the success of such an organization are, a large volume of business in a restricted area, hearty support of individual members, and the selection of a real business manager. The principal benefits derived are,— the individual grower is relieved of the packing and marketing problems, more ready markets will be secured on account of the large amount of fruit of uniform grade, and better prices may be obtained, since such an organization has greater strength in putting through the deal.

MARKETING THE WESTERN NEW YORK PEACH CROP IN 1916

The work of the agricultural department of the New York Central lines serves well to illustrate the importance of one man having a knowledge of actual market conditions, and the volume of fruit moving toward the various centers of consumption.

The basic information collected, and method of organizing the market campaign is well set forth in a circular, "The Marketing of New York State Peaches," by the agricultural department of the New York Central lines.

Briefly stated, the system of marketing was as follows: The fruit growers maintained a central office in Rochester. Each day this office was informed as to the number of cars of peaches on the New York Central lines, and the markets to which they were moving. This information, when tabulated and combined with the morning telegraphic market reports, made a basis on which to advise growers where to consign or divert their cars.

Results

Since the first of September, 1916, to the present time, October 18, 4,340 carloads of peaches have been moved out of western New York by the New York Central lines. To make these figures comparable with those of 1915, at least 60 carloads of plums should be added, making the volume nearly as large as the 1915 figures of 4,419 carloads of peaches and plums. It is probable that when all the records are in, the shipments this season will exceed those of last.

Some results that indicate that all this work was worth while are:

1. This crop has been moved to 375 different towns and cities, increasing the number of destinations of the 1915 crop by 10 per cent. Of these destinations, 73 were in New York State, 38 in New England, 156 in Pennsylvania and points south, and 108 included Pittsburg and points west. Peaches were shipped as far north as Montreal; as far west as Fargo, North Dakota; and as far south as Tampa, Florida.

2. The same nine cities took over one-half of the western New York peach crop both years. While New York City leads in the consumption of western New York peaches, and Pittsburg holds second place both years in point of receipts, each of these two cities received 125 carloads less this year than last. On the other hand, Boston has received 35 carloads more than in 1915, and Detroit over 50 carloads more, while Chicago has received twice as many.

3. In spite of the large crop of peaches in western New York this season, the price to the grower has been the best since the large production began.

4. The price has been well maintained on the markets. In 1915, when New York began to make her heavy shipments of Elberta peaches, serious gluts resulted in all the eastern markets. In 1916, while there was a slight easing of the markets during the heavy shipments of Elbertas, it was largely due to Jewish holidays

and did not develop into a serious glut except in Pittsburg and Philadelphia.

5. The supporters of the office of information were warned in time to save their being caught on these markets. This tended to lessen these gluts and thus indirectly assisted shippers not supporting this office.

6. Perhaps the best recommendation of a new tool comes from the man who has used it for a season. We are informed that the greater portion of the men who supported the movement this season have expressed themselves as being thoroughly satisfied and in favor of the continuation and enlargement of its scope next year.

REPORT OF THE COMMITTEE ON ECONOMICS OF DAIRYING

Presented by

DR. GEORGE F. WARREN

DECREASE IN THE NUMBERS OF DAIRY CATTLE

In the ten years from 1900 to 1910, the number of cows, heifers, and calves in New England, New York, Pennsylvania, and New Jersey decreased by 546,323. The number in New York, alone, decreased 121,946.

NUMBERS OF CATTLE AS GIVEN BY THE UNITED STATES CENSUS OF 1910, VOL. V, P. 352–353

New England

1900		
Dairy cows 2 years old or older	893, 478	
Other cows 2 years old or older	66, 619	
Heifers 1 and under 2 years	208. 858	
Calves under 1 year	290, 071	
		1, 459, 026
1910		
Dairy cows 15 months old or older	841, 698	
Other cows 15 months old or older	101. 559	
Heifers 3 to 15 months old	139, 492	
Calves less than 3 months old	168, 022	
		1, 250. 771
Decrease		208. 255

Middle Atlantic States—New York, Pennsylvania, New Jersey

1900		
Dairy cows 2 years old and older	2. 602, 788	
Other cows 2 years old and older	155, 250	
Heifers 1 and under 2 years	584. 076	
Calves under 1 year	968. 148	
		4, 310, 262

1910		
Dairy cows 15 months old or older	2,597,652	
Other cows 15 months old or older	252,577	
Heifers 3 to 15 months old	420,046	
Calves less than 3 months old	701,919	
		3,972,194
Decrease		338,068

New York

1900		
Dairy cows 2 years old or older	1,501,608	
Other cows 2 years old or older	98,466	
Heifers 1 and under 2 years	335,844	
Calves under 1 year	507,140	
		2,443,058
1910		
Dairy cows 15 months old or older	1,509,594	
Other cows 15 months old or older	138,461	
Heifers 3 to 15 months old	234,728	
Calves less than 3 months old	438,329	
		2,321,112
Decrease		121,946

PRODUCTION PER COW

The Census of 1900 gave the number of dairy cows 2 years old or older in New York as 1,501,608, and the gallons of milk produced as 772,799,352, or a production of nearly 515 gallons per cow.

In 1910 the age groups of cows were necessarily changed. The Census of 1910 gives the following facts for New York:

Cows 15 months old or older	1,509,594
Cows 15 months old or older on farms reporting milk produced	1,151,284
Heifers born in 1909	234,728
Gallons of milk produced	597,363,198

Presumably there were about 178,352 heifers born in 1909 — that is, one year's crop — on farms reporting milk produced. Since so-called cows include heifers 1¼ years old, it would appear probable that about three-fourths of a crop of heifers are included with cows. Or, apparently there were about 1,017,520 dairy cows 2 years old or older on farms reporting milk sold. This would give a production of 587 gallons per cow 2 years old or older, or 5,048 pounds per cow.

UNPROFITABLE COWS

Weighing the milk from individual cows should be encouraged in order that unprofitable cows may be more promptly sold.

At the beginning of the year each farmer in a cow-testing or dairy improvement association should be asked to rank his cows and indicate which ones he considers too poor to keep. A record should be kept of every cow removed, with the reason for removal, also a record of whether the cow is butchered or sold to another dairyman or dealer. Such procedure would enable us to learn the proportion of cows on which the test shows the farmer's opinion to be wrong; to what extent testing results in discarding cows that would not otherwise have been discarded; to what extent the additional cows that are discarded are slaughtered; and what percentage of the cows die.

USE OF BETTER BULLS

The mere fact that a bull is registered ought not to be deemed a sufficient reason for his use in a herd. Dairymen should be advised not to use bulls unless their dams shall have made a record at least as great as the minimum requirements for advanced registry of the breed. The capacity of cows should be based on yearly records.

All agricultural teachers should take pains to point out the fact that it is now possible to obtain pure-bred bulls of excellent individuality from tested dams at very moderate prices, and that one of the most useful activities of the farm bureau managers will be to establish connections between the owners of grade herds and breeders who may have such bull calves for sale.

MORE CARE IN THE PURCHASE OF FEEDS

Farmers should be advised to give special study to the ingredients as well as the composition of mixed feeds before using them; and that, in general, the purchase of unmixed products is preferable.

COOPERATION

One of the most important problems before the farmers today is the question of cooperation. Some of the phases of this that most affect the dairymen are: cooperation in the ownership of bulls, in the purchase of feed in car lots, and in the manufacture and marketing of the product.

MILK TESTS

Much discussion having arisen concerning the reliability and honesty of milk tests, some system of state inspection or supervision of such work would be desirable.

UNNECESSARY RESTRICTION

The ultimate welfare of the dairy business depends on the encouragement of free consumption, and undue or unnecessarily high prices tend seriously to reduce the use of dairy products.

In many cases,. regulations of municipalities and boards of health are of a character that greatly increase the cost of production and distribution, without compensating benefit to the consumers. We believe that there should be an effort made to remove such restrictions or regulations so far as is consistent with public safety.

DAIRY FARMS AS A WHOLE HIGHLY EFFICIENT

Whereas there seems to be a general opinion among persons not farmers, that the majority of farmers — more especially dairy farmers — are inefficient, and that the cause of their financial difficulties is due to their own inefficient methods in not raising more grain, in spending too much idle time off the farm, in keeping poor cows, and the like, all agricultural teachers should use care in making recommendations to farmers not to leave the impression that farmers as a class are inefficient. As a whole, farming is more efficiently conducted than most other lines of business.

ADDRESS BY ASSEMBLYMAN D. P. WITTER

The Wicks Investigation Committee, when it undertook its work, recognized the fact that the farmers of the state are responsible for a large part of our prosperity. One of the greatest interests in the state, the dairy industry, was in such condition that it seemed that the state was certainly going to suffer in many ways unless something could be done to relieve the situation. The first thing was to learn the cost of the production of dairy products. We came here to the college first to find out the methods of determining the cost of production, and got a great deal of information. The committee first came here for two days, leaving to keep engagements on an itinerary outside, but they found they had to come back and spend three days more, getting their main start at the college. Then we went out into the state to determine the cost of production. The first thing I did was to employ a leader from Ontario County who was a good dairy inspector and had had experience with the cow-testing association. I wrote Mr. Burritt that as soon as we were ready to start out I believed it would be an excellent plan for him to enlist the services of the farm bureau managers in collecting statistics of cow-testing associations. This work has been done, and has been and will be of great help. The surveys that have been made through the college, and the large mass of figures on cow-testing associations organized by the Bureau of Farmers' Institutes and collected by farm bureau men have brought to life the Dairymen's League. Although there has been such an organization for several years, it had been able to accomplish very little up to this time. The work is just now beginning. I think we need to have monthly meetings, with lectures, etc., to help us to keep together, because I believe that we have just begun a long, hard struggle.

I may say that we have found but little skimming of milk or other illegal work by dealers, and that not by the large dealers. The Borden Company has about 190 plants in this state, and it would not dare to tell the men in charge of its shipping stations to be dishonest. If a man is dishonest in his testing work, it is of his own initiative, and not on any one's orders. Some of the smaller dealers have been skimming their milk; we have found about three cases. The committee has the power to compel the production of books. We have compelled the production of every book where we have been. It was in this way that we found out that a man was skimming his milk, without going into the creamery. As an example, yesterday a man took in 8,500 pounds, or exactly 100 forty-quart cans, of milk. His books show that he shipped 80 cans to New York City, and kept 20 cans. Today he received 8,500 pounds of milk, and thus had 120 cans of milk on hand. His books show that he shipped to New York 118 cans of milk and 2 cans of cream. Where the cream came from is self-evident. His own books prove the case. This work, found in only three cases, was mostly in the month of February, when the milk was richest.

In regard to the testing of milk, about which there is so much talk, the committee found that the scoring of barns and the testing of milk by the man who buys the milk is not a sound business proposition. In the testing of milk, we have found in some cases that the figures of the cow-testing associations were no higher than those made by the large dealers. Where there is a difference, we have found that many times it comes from the fact that the man in the factory heats his milk to a higher temperature.

On the scoring of barns, I feel that there has been some harm done. As an illustration, 18 men whose barns scored below 68 sold their milk for 10 cents a hundred less than the figure received by men whose barns were given a higher score. The milk was taken to the same factory, however, and dumped into the same vat, and sold by the dealer for the same price. The men responsible for scoring those 18 barns to below 68 received the benefit of about $200 in money. I would not want to say that barn scoring is not a good thing, but I think it is not on a sound basis, as barns are not scored on the point they should be, namely, the production of clean milk.

We have investigated the fixing of prices throughout the state, and have found them more mysteriously made than anything else we have discovered. In the northern part of the state, near Watertown and Camden, prices were fixed by the Cayuga rule, which, after much investigation, we found to be as follows: On a blackboard the man who has a quantity of cheese for sale writes his name and the amount he has. Buyers write opposite these amounts the price they will pay for the cheese, with their names. Either entry may be removed before 5:30 P. M., but after that the entries stand as sales. I found that Harris had bought Jones' cheese for two years. There was no competitive bidding. The buyers simply wrote their names and the amount they would give, and it was considered very ungentlemanly for anyone to bid over.

one who had his name down. The average of all prices on the blackboard was the Cayuga rule. Finally, however, we found that even the blackboard had disappeared over three years ago. It was fixed by a ring, and the market price was about one-eighth of a cent below actual sales. This is typical of how our cheese markets are managed throughout the state.

In regard to the feed dealers, I feel that theirs is an organization that we should know and watch. They are striking at the very foundation of our free government, our farm bureaus, and other institutions of the sort. Of the 2,000, or possibly 3,000, feed dealers in this state, there are but 300 members of the New York State Feed Dealers Association, and but 5 per cent of them know what is going on. It would be safe to say that they have violated several sections of the penal code. They have defied us in a great many different ways. It is principally this organization that we have to fear. Many of the dealers have been supporting the farm bureaus with liberal appropriations. We can get along without their funds. We have to work together or we are going to suffer. The lines are very clearly drawn.

The Wicks Committee has no war on the retailers, but they feel that if a man wants to buy a carload of feed, or any other wholesale product, it is wrong for any other man to say he cannot do it. If I want to get a carload of feed, I should go to my local dealer to get it. But I do not have to do so. If I want to get a carload and get the benefit of a wholesale price, no man should take me by the throat and say that I cannot. That is what the dealers have been doing. That is when we find they step on our rights. The president of the State Feed Dealers' Association made the boast that they have been able to smother the appropriation for the purpose of organization in this state. I think they boast of many things they cannot perform.

There never was a time in the history of the state when there was more need for coordinate action along the line of cooperative work than at the present time. I do not wish to war on the legitimate trade, but they class an organization of farmers — as the grange — that might want to buy a carload of feed, as an illegitimate trade organization. We must, however, hold together, for they will undoubtedly attempt to undermine our organizations by legislation, and they will make every effort to win out in every possible way. I believe that with the lesson we have had of the farmers holding together, we shall be able to hold out.

The committee is not working at the present time, since we have two experienced accountants working on the books of the large corporations in New York City, and this will take about six weeks. In a month we shall go into the city of New York as a committee and there study the entire problem of distribution. Many of the problems that we are discussing here will be brought up at these meetings, and I trust that college men and everybody interested in the welfare of our state will get behind their legislators, and let them know their wishes, so that our farmers will never again have to contend with conditions that have prevailed during the last few years.

ADDRESS BY M. C. BURRITT

It might be worth while just to review the whole situation very briefly and state some things we probably all know but to which it might not be amiss to have our attention called. I think everyone who has been in the milk sections and attended meetings of dairymen realizes that the dairy farmers of this state have been aroused more over this question than has ever been the case in this state before. I have never seen farmers so thoroughly aroused over any question as they have been over this.

What are some of the causes? How does this happen? It has happened primarily because the dairy industry has got into a very bad way; because milk was being produced and sold at a loss; because dairymen were not getting a decent living — certainly not a fair return.

I suspect that the first incentive to the action that has come this fall was the successful Chicago milk strike. It was a pertinent example for the dairymen of New York State. They saw what had been done. They believed they could do the same thing.

The second incentive to this movement was, I believe, the collection and wide distribution of facts as to the cost of milk production. This came about through the testimony of experts here at this college and others over the state, the testimony of farmers, and especially from the large amount of data collected by farm bureaus of the state and presented to the Wicks Committee. Whatever the advantages or disadvantages of legislative committees may be, certainly we must say that the advantage that such a committee has in the matter of publicity is a very great one. All of the educational agencies of this state have been preaching and teaching for years the cost of milk production, but the Wicks Committee got more facts before the people of this state in six weeks than all the educational agencies had been able to in many years. They were the same facts, identically. Daily papers would pay little attention to what was said by our educators; but, offer the same testimony to a legislative committee, and it is published by all the papers, daily and otherwise, with big headlines, and everybody reads it. So, I believe that the getting of this data before a large number of people, focusing public attention on the cost of production, was a second stimulus.

Then, of course, we have that agency without which this fight could not have been won — that farmers' organization, the Dairymen's League. It has proved that it is a good organization, that it can hold its members together — and there were many people who thought it never could be done. But it did hold, and it did carry the day. These things, as I have said, are history.

I believe that this movement has been absolutely sound and right. I base that statement principally on two reasons: First, that the dairy industry was in an unsound condition. It is bad business to be producing anything at a loss; yet that milk was being so produced has been proved beyond question of a doubt. Secondly, the movement has come from farmers themselves — nobody worked this thing out. As a matter of fact, many leading men tried to put the brakes on it. You will remember it was the action of farmers over the state that forced the executive committee of the league to take this action. I am not in a position to speak definitely on this, but I think I am right. It has been the farmers themselves all over the state that have carried the day. It has not been worked up by any outside agency or any particular set of leaders; and a movement that comes up of itself, and gains such proportions as this movement has, must have good worth behind it. For these reasons I believe the movement has been sound and right.

Now, something in which we are all interested is the relation that educational agencies should have to this movement. I am going to put this on the broad ground tonight — not farm bureaus in particular, but educational agencies. The position of the farm bureau is very little different from that of other educational agencies, except that it is closer to the problem. It is comparatively easy to stand off and lay down lines of action, but more difficult to interpret them to farmers themselves. Generally speaking, however, the position of the farm bureau is no different from that of other educational agencies.

Some of us have forgotten that we are the representatives of the public — of all of the people. If we were to define people, we would have to say that they were consumers and distributors, as well as producers. Practically all educational agencies are supported by public funds — by taxation. In other words, all of the people pay for their support. Therefore, these funds ought to be expended in the interests of all the people — or perhaps I should say in the interests of the majority of the people. For the most part in this state, I am very glad to say, we have kept this in mind. In a few instances, however, some of us have forgotten. But I have no criticism for those of us who have forgotten, as I know we live in communities where ninety-five per cent of our people were excited about the subject. It was the first great test of the farm bureaus in this state. They have met the test; they have met the opportunity. It has been a source of very great gratification to me that farmers would turn to the farm bureaus at this time for help, for leadership, and for constructive cooperation, and make every possible use of them. That is what it is for. We have always talked about the farm bureau being an agency for the betterment of agriculture. I am very glad that farmers have at least realized the fact that it is, and have made use of it.

The only justification in using the public's funds, in doing educational work, in entering into this milk situation and taking part as we have taken part, is that it is in the interest of the general public to do it. I believe that we are thoroughly justified on that ground, without going into any further arguments. It is just as much to the interest of the great consuming public in

New York City to have a sound, substantial dairy industry back in the country as it is to the interest of the farmers themselves. Unless, with reasonably efficient methods, milk can be produced with a reasonable profit, and with wages of at least $2.00 per day, the most intelligent of our farmers, the best of our producers, are not likely to be encouraged to produce more milk, and sooner or later the consuming public will be forced to take its choice of doing without milk or paying the price necessary for its production. Dr. Warren's figures bear out this statement. Therefore, we are and have been justified as an educational agency in assisting in this situation, assisting in the organization of dairymen so that they might command or demand what was their just due, and in helping to put the industry upon a sound basis. This is the justification, and not the fact that we are helping farmers as a group for their own selfish interest. If the state or the nation were to make appropriations for the purpose of developing industries to help farmers only, it would be class legislation in which none of us believe. We have been fully justified, in my judgment, on that basis.

The question, as I think everyone realizes, is by no means solved. In fact, it is just raised. The price of milk this winter is a temporary question, and important only for the next six months. The permanent and the important question is, in my judgment, whether or not the dairy industry shall continue under the present improved conditions. If it is, somebody must do a lot of constructive work, and that constructive work is going to fall very largely on our educational agencies, and particularly on those agencies that are on the firing line — the farm bureaus. They will have to depend on the larger, stronger institutions that the state and federal governments have established. This is why we are here, to get the best facts together on this subject.

As to the possibilities that the farm bureaus have for getting the facts before farmers, I should like to call your attention to a few figures. I have here a tabulation of the number of dairymen's meetings at which farm bureau managers of the state made addresses during September. This list is not complete, since some started in August, while others were still continuing in October. During this thirty days, 296 meetings, attended by 26,695 farmers, were addressed. In other words, this agency has the possibility of influencing the opinion and helping to direct the thoughts and efforts of nearly 30,000 farmers a month. If that can be done during this winter, or anything near it, there is a splendid opportunity to exercise a great deal of influence in this situation. The total number of farm bureau meetings held in counties during a normal month ranges from 86 to 300, and the attendance from 3,200 to 18,000. The farm bureaus held during September 336 meetings, with 33,556 in attendance. This shows the possibility of reaching a large number of men. During September, those in attendance were nearly all men who were producing milk and they were there for business.

I do not want to anticipate some of the things that are to be presented later in this conference, but I thought that it would be a good opportunity to outline what we have in mind. I may say that I have submitted this outline to most of the departments in the college concerned in carrying out this program, and it has their approval.

We expect to propose next week to the farm bureau conference a state-wide project on the dairy situation, which we hope will lead to the solid organization of all the educational agencies in this state that are ready to help in the situation. The only way this program can be put through is to get every possible agency in the state lined up solidly behind it. I believe the situation in the state is ripe for this kind of a program.

We have stated the object of our project as follows: "To make permanent the present improved conditions in the dairy industry in New York State, by promoting with information and educational effort, (1) increased efficiency; (2) cooperative ownership; and (3) increased consumption of milk." Very little of this is new — what we are proposing is to organize it and put back of it unity of effort.

Item (1), under Procedure, reads:

1. *Increased efficiency* through
    (a) Dairy improvement associations
        (1) weighing milk and feed
        (2) discarding low-producing individuals
        (3) feeding balanced rations

(b) Growing and seeking to buy feeds cheaper
(c) Dairy farm management analyses
(d) Keeping accounts
(e) Improving the quality of the product
(f) Breeding of better cows

I believe that the consumer at the present time is, comparatively speaking, quite willing that the dairyman should have an increase in the price of his milk. I think he is governed by the facts that have been printed by the press of the state, but, if the consumer should by some chance become convinced that the farmers are not efficient, and that this increased price of milk is not necessary, we are headed for trouble. If you do not believe that, think of what happened to the great sympathetic strike in New York City — smashed in less than ten days by public opinion. So would this milk price question have been smashed had not public opinion been with the dairymen. I believe we cannot give the dairymen of the state any greater help than by holding up to the public the cost of milk production in this state.

2. *Cooperative Ownership* by farmers of milk-shipping and manufacturing facilities, by furnishing facts as to:
(a) The principles of cooperative organization
(b) Requirements for and costs of shipping stations, creameries, and cheese factories
(c) Constitutions and by-laws of cooperative ownership associations

You already have some of the ammunition in your hands, and more will be forthcoming as soon as it can be made available. I think I am perfectly well aware of all the trouble in store for anybody who undertakes to carry out this program, but I believe we are on sound ground. At least, we are assured by those in this institution who are in a position to know, that we can carry out this program.

3. *Increased Consumption of Milk* through an advertising campaign to demonstrate:
(a) Its comparative food value
(b) Its comparatively low cost
(c) Its possibilities as a substitute for more expensive foods

Of course, as individuals or separate agencies, we would probably not get very far with this. Perhaps we will not anyway. But, I believe that if this campaign is organized properly, and gets the help of all parties — the Dairyman's League, the State Grange, and other state agencies, and if we are all willing to take hold and work, we can succeed.

I am speaking of all these things from an educational viewpoint. To go out and build these plants is the business of the farmers themselves. We are simply furnishing to the organizations the ammunition for the campaign. I believe the organizing of this campaign and the carrying out of it is necessary if the favorable position we now hold is to be maintained.

ADDRESS BY SENATOR M. S. HALLIDAY

I think it might interest you to know something about the conception of the Wicks Committee, and how it happened to come about. In the New York State Senate, Senator Wicks and I sat next to each other. About that time the Thompson Committee was having a great deal to do in New York City. We commented on the fact that up-state farmers were paying a good part of the cost of that investigation, and were getting no benefit from it. One day Senator Wicks said, "I wonder if there is not something we can do up-state that would be worth while."

Some time later Senator Wicks told me that he had talked with several prominent dairymen, and men who have first-hand knowledge of conditions in the dairy industry, and they told him that there was something very wrong with this industry, one of the most important of the state. Senator Wicks talked the matter over with Leader Brown and Speaker Sweet, and a little later a resolution was passed and the Wicks Committee appointed. Senator Wicks was appointed chairman, as he is naturally a good leader and interested in this line.

There have been many things in the work of this committee that are of vital interest to everyone. When they started out to take testimony all over the state, the newspaper men went with them. The farmers almost unanimously testified that they were not getting enough money for their dairy products and these facts got into the newspapers. The general public therefore began to say to themselves that possibly the farmer does not get enough for his milk. The price of milk, however, is one of the housewife's pet hobbies, and she is not going to allow anyone to increase this price if she can stop it, unless you appeal to her reason. The educational work of the Wicks Committee was therefore very valuable.

In some parts of the state the farm bureaus have been in operation for only a few years, but we found that we were getting reliable information and facts from its members and officers. The facts came to the committee in public hearings, and the newspaper men were glad to publish them. In addition to these two fortunate circumstances, the formation of the Wicks Committee and the cooperation of the farm bureaus, the Dairymen's League had been organizing. It had been abortive in most cases, but it had a secretary and president who were very much interested in the work, and there was a nucleus that was the foundation upon which was built the general uprising on the part of the intelligent farmers in regard to the price of milk.

All of these factors were necessary to make successful the strike of the farmers for some adequate price for their milk. These three things all dovetailed together and worked towards the accomplishment of the one thing, so that when the Dairymen's League made its demands it suddenly found that it had public sentiment back of it.

The Feed Dealers' Association said that a man who started a general store with farm implements, etc., could not sell feed. In one case they actually broke into a car in order to find out who shipped the car to a person on their blacklist, thus committing burglary. We investigated the grain operators in Buffalo, who are closely related to the feed dealers and the price of feed. We found one peculiar thing — that they weighed in the grain and weighed it out in exactly the same way, but they had 2,000 to 3,000 bushels left over at the end of the year. This they explained by stating that in weighing-in or weighing-out grain the scale man always "tips the beam." The grain comes into the elevator in small quantities and is sent out in large quantities, so that on the incoming grain the beam is "tipped" more often than on the outgoing.

Of course when we get into New York City we will go into the distribution end. All that the farmer is interested in is to see that he gets a fair margin of profit for his milk. What we are going down there for? —to see what the conditions are. When the farmer receives a fair profit on his investment and pay for his labor that is not sweat shop pay, when he can get rid of the boarders in his stable and hire veterinarians — then he has accomplished all that can be expected.

REPORT OF THE COMMITTEE ON POULTRY

PROFESSOR E. W. BENJAMIN

It is hoped that the present effectiveness and strength of the poultry institute work in New York State may be further increased during the coming year by a consideration of the following suggestions brought to the attention of the committee during the present Normal Institute, and arranged in two groups:

1. Truths that are either new or of such importance that they seem to be worthy of special emphasis during the coming year.
2. Suggestions for new lines of activity, cooperation with present educational agencies, or special opportunities along certain lines of activity already being developed.

FACTS TO BE EMPHASIZED

The truths appearing to deserve special emphasis during the coming year are:

1. Breeds:
   (a) There is no one best breed. Keep the breed preferred and learn to make it lay.
   (b) Under most farm conditions, hens that will hatch and rear young and be unaffected by temperature are preferred.
   (c) Mongrels do not look, lay, nor pay so well as purebred fowls.
2. Incubating:
   (a) Use only eggs from stock of high vitality.
   (b) Hatch early to secure fall-producing pullets.
3. Brooding:
   (a) Rear chicks in medium-sized flocks of about 250.
   (b) Have plenty of outdoor range.
   (c) Feed sour milk.

4. Feeding:
    - (a) Fatten surplus poultry by feeding twice daily on mash made of 5 pounds corn meal, 2 pounds white wheat middlings, and 1 pound ground oats, mixed in ratio of 1 pound mash to 2 pounds skimmed milk. Fifteen per cent of ration in meat scrap will replace milk, when it can be mixed with water. Feed for 12 to 14 days. This costs from 8 to 10 cents for feed per pound of gain.
    - (b) Feed prices are about one-third higher than a year ago, and pullets must lay to pay for their keep. Separate them from hens and feed them 8 to 10 per cent of the ration in meat scrap (or milk to drink); green feed, such as mangel beets or cabbage, and oyster shell. An occasional moist, crumbly mash will help to start the pullets laying. (This should be fed in small amounts in addition to the regular dry mash).
    - (c) Wheat, when too expensive, may be replaced by barley, or by adding more wheat bran and middlings to the mash mixture, when more meat scrap should also be added to retain the same proportion.
5. Selection and breeding:
    - (a) In the summer, cull out the hens as fast as they stop laying, until the flock is reduced to the number desired to keep over.
    - (b) Do not kill laying hens at any time of the year.
    - (c) Those pullets that begin to lay first have the longest period in which to lay.
    - (d) Select breeding stock in the fall of the year with regard to constitutional vigor and late laying.
    - (e) Select the pullets in the fall of the year with regard to size, vigor, and early laying.
    - (f) Select eggs for hatching with regard to the commercial value of eggs.
6. House construction:
    - (a) One flock of hens and one flock of pullets up to 500 of each is preferable to several small flocks, as it saves in cost of house construction and economizes labor.

- (b) Wide houses are cheaper per hen capacity than long, narrow ones. These can be built 25 feet wide, with doors to admit horse and wagon.
- (c) Houses should be equipped to save labor by using large mash hoppers, grain bins, and nests without partitions. All equipment should be placed high enough so that the hens can use all of the floor space. Devices should be simple, light, and removable to facilitate work.
- (d) The best ventilators are windows in two sections, dropping in from the top, between guards, in connection with wind bafflers, working automatically. Damp houses indicate lack of ventilation.
- (e) Equip houses with open or glass fronts to give plenty of sunlight.

7. Diseases and sanitation:
   - (a) Keep fowls happy and healthy by an abundance of sunlight, fresh air, and exercise.
   - (b) Keep the houses clean and the litter fresh.
   - (c) Preventing disease by right conditions is better than trying to cure diseases.

8. General management:
   - (a) Keep enough poultry to make it worth while to take good care of it.
   - (b) Keep simple records of egg production and mortality in order to estimate approximately the profit or loss and to show the progress from year to year.
   - (c) Reorganize and rearrange the buildings with regard to saving labor and securing more efficient results.

9. Marketing:
   - (a) A washed egg deteriorates more rapidly than one that is soiled, if the dirt is dry. This fact should be considered in advising farmers to clean all dirty eggs, as they often understand that the eggs should be cleaned immediately after being gathered, even though they are not to be sold until several days later.

(b) It is possible for most farmers in New York State, having 100 hens or more, so to produce, handle, and market their eggs that they can realize net from 3 to 5 cents below the top market quotation in the large primary markets such as New York or Boston.

(c) Cooperative organizations for the marketing of poultry products must assume the responsibilities of private dealers, and should expect to pay the manager a salary approximately equivalent to the profits of a private dealer. The object in most cases should be the furnishing of better marketing facilities rather than a gain to the farmers by a simple absorption of the private dealer's profit. The accompanying losses are too often not considered.

10. Organization:

Urge poultrymen to organize local poultry associations for the following purposes:

(a) Education, as to most approved methods by means of study clubs, lectures, demonstrations, and discussions.

(b) To hold poultry and egg shows for educational and advertising purposes.

(c) To buy and sell cooperatively.

11. Display of material:

The factors having to do with success or failure in the poultry business may well be graphically shown by the aid of suitable illustrations, charts, transparencies, etc.

SUGGESTIONS CONCERNING WORK TO BE DONE

Suggestions by the committee for new or further development of present lines of activity, or cooperative effort between the present educational agencies may be divided into two classes: first, efforts of the College of Agriculture to assist the poultrymen of the state direct from the college, in which cooperation of the institute workers is asked; and, secondly, opportunities for work in the field by cooperative effort between the various agencies involved.

The College of Agriculture is endeavoring to assist the poultrymen in the following ways:

1. By conducting experiments with poultry.
2. By correspondence.
3. By special instruction in regular and winter courses.
4. By showing and explaining the work of the poultry department to visitors.
5. By personal assistance in selecting breeding pens.
6. By poultry reading-course lessons.
7. By educational exhibits at the fairs and poultry shows.
8. By lectures and demonstrations at poultry association meetings and poultry shows.
9. By lessons in poultry husbandry for rural schools.
10. By cooperative experiments with poultry.
11. By testing fowls for vigor and egg production at the Cornell Breed-Testing Station.
12. By maintaining a mail account system, whereby assistance will be given to farmers who wish to keep poultry accounts.
13. By taking poultry farm surveys and by correlation of results.

The work in the field that should be developed by cooperative effort along with the institute work is as follows:

1. Demonstrations on the farm:
    - (a) Selecting stock.
    - (b) Poultry accounts.
    - (c) Poultry house construction.
    - (d) Grading and packing eggs.
    - (e) Killing and picking poultry.
    - (f) Caponizing.
    - (g) Laying out a poultry farm.
2. Demonstration schools (all or part poultry).
3. Exhibits of models, charts, maps, etc., at the poultry shows, fairs, farm trains, clubs, etc.
4. Rural school work in cooperation with the rural school superintendents.
5. Organization of informal poultry clubs.

RECENT RESULTS CONCERNING THE USE OF LIME ON THE SOIL

Presented by

PROFESSOR E. O. FIPPIN

Two important reports on the subject of liming the soil have appeared within the past year and a half.

The first is Bulletin 261 of the Pennsylvania State Department of Agriculture, by Dr. William Frear, entitled "Sour Soils and Liming." It is a bulletin of 220 pages exhaustively reviewing all available literature on the subject of lime for the soil in its many relations. Citations are given to the original sources of information. This bulletin is a mine of information on all phases of the lime question in so far as there are any data, and all institute men dealing with soils should possess a copy. It may be secured by addressing the Secretary of Agriculture, at Harrisburg.

The other report is the thesis of Walter E. MacIntire, presented to Cornell University in the fall of 1916 in partial fulfillment of the requirements for the degree of Doctor of Philosophy.* It is filed in the University Library, but is not in accessible printed form. Dr. MacIntire is the research chemist of the Tennessee Experiment Station under the Adams fund and has confined his investigations to the relation of lime in different forms to the problems of soil fertility. For this purpose extensive facilities have been developed in the way of field, cylinder, and tank plots, and several bulletins have been published from that station giving the report of important results.

Dr. MacIntire's research problem for the degree of Doctor of Philosophy has been an extension of the study of lime, the thesis being entitled "The Carbonation of Burnt Lime in Soils," and new data have been developed and summarized. The more critical points in connection with the practical use of lime developed in these two reports are here reviewed for the guidance of institute workers.

1. MacIntire shows that under field conditions, checked by laboratory studies, applications of caustic lime to the extent of several tons per acre are completely carbonated in the normal soil in a week, and for smaller applications in a much less time.

2. From examination of the soil of the limed plots of the much-

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* See article by Dr. MacIntire in "Proceedings of the Seventeenth Normal Institute," page 52.

quoted Pennsylvania series, he shows that the entire quantity of caustic lime has been entirely carbonated and that no caustic lime exists in the soil, even in the nodular fragments of lime that are visible. The total application has amounted to sixteen to eighteen tons per acre on different plots applied from 1881 forward, the last application of two tons occurring from one to four years preceding the sampling for examination.

3. It is shown that free moisture is essential for the union of caustic lime with carbon dioxide. This is always available from the atmosphere under field conditions, if not from the soil.

4. It is shown that the necessary carbonic acid is drawn both from the soil atmosphere and from the free atmosphere above the soil. Caustic lime carbonates more rapidly on or near the surface than in the depths of the soil.

5. It is shown that there is no destructive chemical effect of caustic lime on the organic matter in the soil as measured by the liberation of carbon dioxide, even under the condition of the severe laboratory tests carried out. This conclusion is supported by the more recent critical examination by Frear of the field plot results at the Pennsylvania Station.

6. The liberation of carbon dioxide through the activity of organisms in the soil is promoted by moderate quantities of lime, and this carbon dioxide hastens the rate of carbonation of the caustic lime.

7. Application of caustic lime to the soil in excess of three tons per acre partially sterilizes the soil; but this effect is quickly followed by a more intense growth of microorganisms, which effect is usually beneficial to crop growth.

8. It has been shown that both calcium and magnesium lime in the soil undergo change from the carbonate form to silicate combinations, which maintain a more mild alkalinity of the soil than do the carbonates. This change is more rapid for magnesium than for calcium lime. It is more active for lime applied in the caustic than in the carbonate form. Magnesium lime applied in ordinary amounts does not persist in the soil as carbonate for more than a few weeks, but is effective in keeping the soil in a neutral or slightly alkaline condition and is lost from the soil by leaching less rapidly than calcium lime.

9. There is no particular danger from the use of a magnesium lime due to the disturbance of the calcium magnesian ratio. The presence of a reasonable amount of calcium and the effect of the soil itself destroys any possible injurious effect that a magnesian lime might have.

10. Frear has summarized several investigations of the importance of fineness of lime carbonate as follows: " Limestone coarser than 60-mesh is relatively of little effect, and the value of crushed limestone for agricultural use should be judged as to fineness by the proportion of the siftings of that or a greater fineness." At the same time it should be recognized that the available data are not satisfactory and should cover a wider range of fineness and a longer period of time.

11. On the movement of lime in the soil, Frear summarizes the data thus: " Lime does not move freely in the soils of humid regions. Lime intended for neutralizing the surface soil should not be plowed under because it does not move easily; lime to neutralize the subsoil must be placed there directly; lime intended to neutralize the surface soil must be thoroughly stirred through that soil by mechanical means when the soil is dry enough to work."

12. Bearing on the range of tolerance of plants of acidity and alkalinity, the importance of which was pointed out in Circular 25 of the Cornell Station, Frear's summary data for clover and alfalfa show that the clover practically ceases to grow where the lime requirement is 1500 to 2000 pounds per acre. Alfalfa fails at less than 1000 pounds lime requirement. He concludes that the limit of tolerance is not an exact figure but varies with the other conditions of the soil affecting fertility.

Some data are presented showing a similar variation in range of tolerance for the microorganisms of the soil concerned with fertility.

13. The preceding statement shows the efficiency and the safety from the use of the several forms of lime. Any of these common forms may be used. The conclusions reached must not be construed as prohibiting the use of any of the lime-carrying materials in the market. As a result of low first charge and low freight and handling charges, it may be more economical to use materials

that do not fulfill all the above-stated conditions. For example, where limestone may be ground on the farm and a large quantity can be used at low cost per ton, this material may be more economical than material ground to pass a 50-mesh screen and of perhaps higher purity. In the same way the low purchase cost and low transportation charges may make more economical to the farmer such materials as tanners' lime; coarse, wet marl; crusher screenings; wood pulp lime; and other forms available near at hand, than lime of higher efficiency ton for ton, secured at a distance at a higher cost. In each case the purchaser should calculate the cost of effective lime at the farm, taking account of all these factors.

15. As a general guide to farmers in the application of lime in the absence of specific determinations, we recommend the following amounts of limestone or equivalent quantities of other forms:

For sandy and gravelly soils, 1500 pounds.

For clay soil, 3000 pounds.

For very acid soils and for very sensitive crops, increase this amount by one-third.

For less acid soils or less sensitive crops, decrease these amounts by one-third.

16. The advisability of introducing small, portable crushers to supply ground limestone must be determined from a careful calculation of all the factors of cost for factory ground limestone compared with the material produced locally by the small mills. Allowance should be made for the coarser grinding of the local mills, which will make larger acre applications necessary. Mills to grind one to three tons per hour to pass a 10-mesh screen cost from six hundred to one thousand dollars, and require from twenty to thirty horse power.

There are a few situations in the state where limestone is available, the regions being remote from transportation and other sources of lime, where several tons of the coarser product of the small mill may be used more economically than a smaller quantity of a finer ground material involving high freight and handling charges.

Professor Barker presented a statement dissenting from conclusions on fineness.

REPORT OF THE COMMITTEE ON DRAINAGE

Presented by

PROFESSOR B. B. ROBB

The peculiar season that we have just passed through has been a great object lesson to us in pointing out the effectiveness of drainage on some farms and the keen need of it on many others. The prolonged rainy season in the spring and early summer overtaxed many underdrained soils to the extent that tillage was delayed because the soils were not able to transmit the water to the drains fast enough.

As we all know, it was very wet early in the season; then about July first it changed to equally dry weather. So extremely wet was the early part of the season that in certain instances soil that was well underdrained could not transmit the water to the drains fast enough to keep the surface in a tillable condition. This should by no means condemn the practice, for as soon as the continuous rains stopped, well-drained fields were dry enough to till considerably in advance of those poorly drained. On the other hand, when the drought set in, the undrained fields soon baked down hard and dry, while the underdrained soils remained loose and friable and retained their moisture.

It seems advisable that it be made clear what is meant by "good drainage." There might be quite a gap between a lecturer and his audience; the layman may understand good drainage to be sufficient ditches (open or otherwise) to remove the surface water. The lecturer should have in mind a system of underdrains sufficient to remove not only the standing water but also to lower the water table below the plantroot zone.

By all means encourage the installation of tile drains. If a man or community is found to be unfamiliar with the practice, persuade them to start. This start may well be in a small way; namely, ask them to install one or two short drains — possibly drain out a wet spot on the farm. A small beginning is usually an encouragement to an extended system. It is often important, however, that the beginning should be so planned as to work into the extended system. Careful planning at the outset eliminates the danger of laying a main too small to carry the water brought to it by future installations. Having seen the beneficial results from the small beginning, the farmer will then be in position to study the entire farm with a view of improving its moisture condition.

OPEN DITCHES

Open ditches have their place. They are principally used as outlets. On upland they serve primarily to remove surface water, but in general do not tend to lower the water table in the soil. In muck land, however, they are quite satisfactory although wasteful of land; they also require frequent attention, harbor weeds, and cut the area into small patches. Owners of muck lands are beginning to use tile. These tile are laid on boards unless the muck is shallow enough so that they may be laid in the hard subsoil. If the bottom of the ditch is quicksand, lay the tile on boards and cover with muck and bogs.

It is believed that there is still a place for the "pick and shovel" in the practice of drainage; also that it has not yet been fully demonstrated that large power machines greatly reduce the cost of opening trenches, except under fairly favorable conditions. They do, however, serve to get the drainage done even though at a cost equal to that of hand digging. It will readily be seen that there is a great advantage here, since hand labor is often hard or impossible to get. By the use of machinery the drainage can be put in quickly, and the owner gets his profits in greatly increased crop yields rather than in a saving on the cost of construction. This we feel is an important point. A member of the committee writes as follows:

"With reference to hand tools versus machinery: Machines can never entirely replace hand labor for excavating drains. Each has its place, and the land owner must discover by investigation which is the most economical to employ in his case. The small investment required for hand tools is a very important factor in making this decision, for instead of two or three thousand dollars, from two to three dollars will cover the investment for what hand tools may be necessary. This would include two shovels, one the ordinary long-handled pointed shovel, the other much the same style but narrower. A drain spade 14 or 16 inches in length and about 4 inches wide, also pointed, and a pick will be all the tools necessary for excavation. To insure a perfect grade, a ditching level, consisting of a straight edge 16½ feet long with either a bubble or a plumb, is very easily made by any farmer. To make joints in laying the tile a hammer or hatchet should also be at hand. This is all that it is necessary to invest in tools for ordinary hand drainage work. The work may be expedited very often by the investment in some of the cheap ditching plows costing from twelve to fifteen dollars, which are simply heavy subsoil plows to supplement the hand work. Where the main lines of ditches have been dug by machinery, the shorter branches may be put in at convenient intervals by hand much more cheaply than with large, heavy machines, particularly with the stony conditions found in most of our New York State soils. Hand ditching should be done in the spring, if the season is wet."

DITCHING MACHINES

There are three classes of ditching machines, namely:

1. The ditching plow. This machine is often classed with the hand drainage tools. It is a horse-drawn implement not unlike a subsoil plow. Its function is to loosen up the dirt only, therefore saving the need of picking it up. This twelve to fifteen dollar machine is made by nearly all plow manufacturers. It requires two horses and one man to operate.

2.* Horse-drawn ditching machine. This is a large plow requiring six to ten horses or a tractor to draw. Its use has proved very successful in certain regions, especially where stones are not too numerous. This machine costs from $250 to $300. One member of the committee writes as follows on this class of machines:

"With regard to the use of the horse-power type of machine for opening ditches for tile draining, it is believed that such machines are entirely practicable on soils reasonably free from stones, where the length of runs and the amount of drainage will warrant the expenditure. As a source of power, at least six heavy horses or a farm tractor is needed.

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* Note for the benefit of the Institute. Particular reference is made here to the Cyclone Ditcher, manufactured by the Jeschke Manufacturing Co., Bellevue, O.

"We would not recommend the cooperative ownership of such ditching machines unless it be the cooperative backing of an individual who should manage the machine and do the ditching by the foot or rod."

If a tractor is used, a break pin should be in the coupling.

3. Traction ditchers. These machines are operated by a steam or gasoline engine. They cost from $2,500 to $3,500. They work successfully except in stony clay soil or soils too wet to bear the weight of the machine.

The live issue in the committee meeting was as to the advisability of urging farmers to cooperate and buy one of these machines or to induce an individual to purchase one and go into the drainage business. One member summarizes the opinion of the committee as follows:

"The use of ditching machines of the heavy, expensive, gasoline traction type is feasible only where soil conditions are favorable, and when there is a very considerable amount of drainage to be done.

"Their use is not practicable on clay soils if there be any large number of boulders or large stones.

"Their purchase may be encouraged where soil conditions are favorable, where much drainage is to be done, and especially where cooperative backing may be secured.

"It is believed unwise to purchase them either as a farm bureau proposition or as a cooperative partnership enterprise. It is to be emphasized that the cost of upkeep is high and the liability of serious breakage is great."

Another interpreted the feelings of the committee as follows:

"In considering power machinery of the $2,000 and upward class, it is conceded that they do and do not give satisfaction. The types of soil in which they are to be operated, the amount of drainage likely to be contracted for in case a machine is purchased, and the ability of the operator are prime considerations. Before a decision can be justly drawn, such data as the life of such machine, the amount of work done during that period, and the actual cost of upkeep should be at hand. These figures are not available. Until they are it seems that this should be the attitude of institute and extension workers in regard to this type of machinery. As an economic investment it must be decided by the individual or group of individuals contemplating the purchase, whether or not a possible temporary loss on the operation of the machine can be sustained in view of the fact that drainage expense is overcome with two or three years of cropping the improved soil. A big factor in favor of incurring the temporary loss on investment is the long-time period over which this loss can be stretched and more than made up by crop returns. In general, this fundamental soil improvement is going by default and will continue to do so to a large extent if nothing faster than hand ditching is put into effect. This has been clearly demonstrated in Tompkins County this year by the rush of farmers to get the college machine when they found it available at 30 to 50 cents per rod of ditch constructed. In other words, preaching the theory and benefits of drainage has not put our farmers at work with pick and shovels; the machine has been putting in miles of drains."

THE QUALITIES OF TILE

Drain tile is divided into two groups or classes, namely, concrete tile and clay tile.

Concrete Tile

Concrete tile is considered satisfactory for drainage purposes provided it is well made. By being well made is understood that the sand must be sharp and clean, and be well mixed with good cement. The mixture must not be too weak, usually 1:4 to 1:5, depending on the quality of the sand. After molding, it is very important that the tiles should dry slowly. Prices being equal, clay tile is to be preferred. There are, however, many districts where the freight rates on clay tile are exceedingly high. In these localities if one can readily obtain sand, and has the time, he can make his own tile of concrete profitably. The greatest saving, however, is on the larger sizes. Three-inch tile can be made for from $10 to $15 per thousand. A warm barn basement is an excellent place to make concrete tile, especially in winter time.

Clay Tile

Clay tile is subdivided into three groups, namely, soft-, medium-, and hard-burned; vitrified; glazed.

The first class is what is generally known as porous tile. The walls will take up water but will transmit little or none of it. If this water-soaked wall freezes it is quite liable to break down. They are also likely to have lime pebbles in the wall. Tiles containing these lime pebbles should be rejected.

The vitrified and glazed tile differ from the others in that their walls are impervious to water. This is not a disadvantage, since the water enters a tile drain through the joints and not through the walls of the tiles. Other things being equal, vitrified or glazed tile are to be preferred.

There are certain hard-burned tile on the market that would fall under class one. These tile are very satisfactory, especially when the price, uniformity of shape, and small amount of breakage in transit are considered.

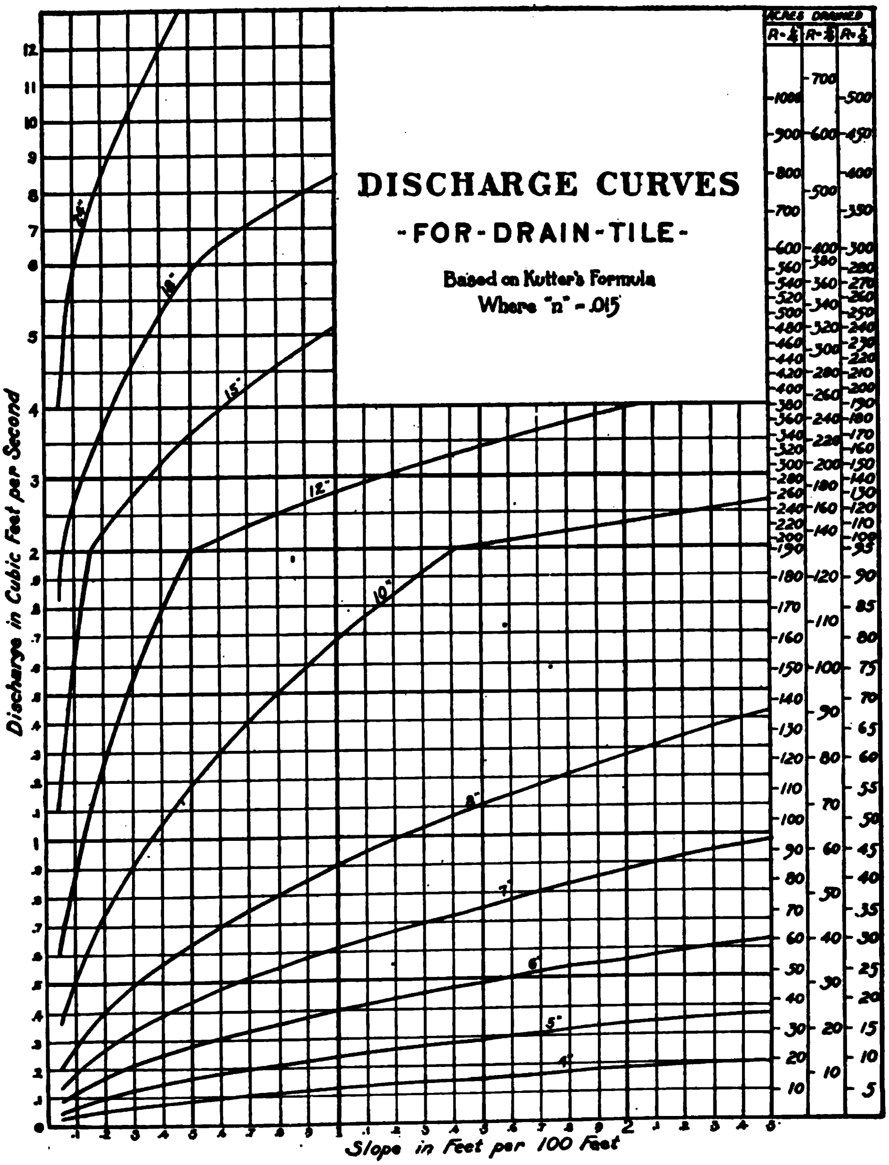
As to whether a round or hexagonal tile is better is a matter of personal opinion. More stress should be placed on quality than on shape. A discussion of tile will be found in "Elliott's Engineering for Land Drainage" published by John Wiley & Sons, New York City.

The following is a partial list of tile manufacturers:

American Clay & Cement Corp., Rochester, N. Y.
American Sewer Pipe Co., Akron, O.
Biglow Tile Co., New London, O.
A. S. Childs, Geneva, N. Y.
Lyth Tile Co., Angola, N. Y.
Lyons Sewer Pipe Co., Lyons, N. Y. (Cement)
National Fireproofing Co., Pittsburgh, Pa.
Rochester Brick & Tile Co., Rochester, N. Y.
Robinson Clay Products Co., Flatiron Bldg., New York City.
Warren Brick & Tile Co., Warren, O.
Driscoll Bros., Ithaca, N. Y.
John H. Jackson Tile Co., Inc., Albany, N. Y.

SIZE OF TILE

The common size of tile for laterals in this state is three-inch. Two-inch tile if well laid would probably carry the water. On account of their small size, if they are slightly out of line a large portion of their carrying capacity is cut off. The difference in



DISCHARGE CURVES

-FOR-DRAIN-TILE-

Based on Kutter's Formula
Where "n" = .015

cost between two- and three-inch tile is very slight. The cost of digging the trenches is the same. We therefore feel that it is not good economy to buy two-inch tile. In a soil that is silty, where the grade is slight, or in muck, four-inch laterals are advisable. The chart on page 74 shows the approximate size for main drains. This chart is taken from a similar chart put out by the United States Department of Agriculture, Office of Drainage Investigations, Washington, D. C., where the original may be obtained if desired.

In order to illustrate the use of these curves the following example is given: Suppose one wishes to know what size of tile will be required to carry the water from 150 acres, the drain to have a fall of 1 foot per 100 feet in length. In the right column marked "Acres Drained," find 150. Trace the line opposite to the left. Now on the bottom of the chart will be found slope in feet per 100. Follow the line vertically above 1 foot until it crosses the aforesaid horizontal line from 150. This point lies between curves representing 8- and 10-inch tile. Therefore, a 10-inch tile is required as the point is above 8. The three columns at the right, under acres drained, represent the removal of ¼, ⅜, and ½ inches of water from the entire drainage area in 24 hours. If the watershed is comparatively flat, select the ¼-inch run-off. If water should be removed at a faster rate, owing to soil conditions or a more rolling watershed, select a higher rate of run-off, as R=⅜ or R=½.

DEPTH OF TILE DRAINS

The proper depth of drain varies with the kinds of soil, etc. The most common depth is two feet of dirt on top of the tile. This is a figure that it is well to remember as it fits the great majority of cases.

STONE DRAINS

Stone drains should at least be mentioned — not that they are advisable, but because they are much better than no drainage. In fact, a stone drain well put in is as good as a tile drain so long as it works. Their chief disadvantages are their high cost and short life.

LEVELS

In case considerable leveling is to be done, it is advisable to procure the services of an engineer. If only a small amount is to be done the farmer will find a very convenient and helpful instrument can be made from a carpenter's level by attaching to it sights, which cost about 60 cents. The level should then be mounted on a level stand that will allow it to swing around horizontally. Such a level stand and sight can be purchased from any hardware dealer, or from mail order supply houses. They are manufactured by the Stanley Rule & Level Co., New Britain, Connecticut. The cost of the level stand is $1.50.

REPORT OF THE COMMITTEE ON HUMUS

Presented by

H. J. WILDER

HUMUS MAINTENANCE ON GENERAL FARM LANDS

No matter what our belief as to the general question of soil fertility, there can be no doubt that the maintenance of humus is fundamental. Commercial fertilizers, profitable as they may be in some cases, do not maintain crop yields for any great length of time, unless a good supply of humus is maintained in the soil. Hence, an adequate supply of humus enables soils to use commercial fertilizers more efficiently. Deep-rooted crops leave roots whose decay makes heavy soils more porous, fills the larger spaces of light soils, and makes all soils more retentive of the moisture available, thus enabling them to furnish moisture to the growing crops more uniformly throughout the growing season.

Virgin soils have usually become less productive as farmed. Commercial fertilizers alone have failed to restore their pristine productively, but a combination of humus and some commercial fertilizer on land kept sweet with lime and adequately drained has usually given steady profits.

On tillable land, not too subject to injury from erosion, a short rotation is essential for cheap humus, as heavy sods to plow down are far the cheapest form of green manuring in all New York cropping systems, except with some of the intensive crops, such as orcharding, market gardening, etc., where they are not often practicable. Such a rotation is potatoes or beans, followed by wheat and clover. The same end may be secured by a double short rotation, or by a so-called long rotation, which involves more than one intertilled crop and a legume for more than one year, as, potatoes followed by navy beans, corn, soy beans, wheat, clover; or, corn, cabbage, navy beans or soy beans, wheat, clover.

Wherever the yield of oats is light, soy beans are usually worth more for feed and at the same time leave the ground in far better condition, both as respects fertility and as a seed bed for wheat. But heavy sods to plow down exist in any one year on only a small portion of the farm lands of New York State. Hence, the problem is, how to increase their acreage. By trying to spread over more land? Not at all. That has been the method on many farms and it is largely responsible for the necessity of discussing this problem at farmers' institutes and elsewhere, for it nearly always results in a so-called long rotation; as, corn one year, oats one year, and timothy hay for a decade or so. Unless the timothy is top-dressed, this plan is little more than a one-crop system of timothy hay, which finally becomes so thin that it must be cultivated a little in corn or potatoes to increase the yield of hay. Such a sod furnishes a minimum of vegetable matter to plow down.

"A small farm well tilled" is a common adage, yet most farms contain more land than is well tilled, and the owners do not, and in many cases are not going to, sell part of their land. What is the solution in actual farm practice? Use short rotations on the portion of the farm that you have capital to run, and temporarily let the other land go. Only in this way can thick sods be had to plow down. Commonly, clover is found only on the newly-seeded ground, and it is replaced by timothy, which from the soil-fertility viewpoint has a respectable rooting system only for the first year, as only about one year is necessary for it to appropriate the humus that the clover has put into the soil. Then the timothy sod becomes thinner each year; and, by the time it is turned again, it supplies very little humus.

A limited amount of good sod is found on nearly every farm. Plow it deeply to grow corn or potatoes this year cheaply, as it will take only one-half as much of the farm supply of manure to get a given yield as will a worn-out sod. Put the other half of the manure on second-year sod, not in hot, dry weather, but when moisture conditions are favorable. This will so increase the yield of hay for feed and so thicken the sod that it need not be plowed again until at least one year later. Used in this way, manure will give much larger returns than if applied to the cultivated crop grown on this sod, as it gives nearly double use of the manure, and the acreage of thick sod on the farm will be gradually increased. Ten loads of manure per acre twice in a rotation is worth much more than an application of twenty loads once during a rotation. Where capital is available, the above practice may be supplemented, and the upbuilding of the soil fertility be accelerated, by applying commercial fertilizer, particularly nitrate of soda under normal price conditions, to first- or second-year soils. On some farms this may well serve as a substitute for applying stable manure directly to sod, as it permits more frequent small applications of stable manure to a larger area of these thickened sods plowed down for a cultivated crop. But this is not recommended for thin or poor sods; it will pay only where there is a good stand of improved grass plants.

It is not often practicable to plow down legume crops in New York on farms where good stock is kept, though the practice may be excellent where little stock is kept, or under other cropping conditions. Have as much of the farm land as practicable in legumes, feed them to good stock, and save the manure. Waste of manure in New York is one of the most appalling losses. Stress should be laid, not on adding some form of phosphorus or other amendment to what is left, but on keeping the fresh manure under cover in level, tramped heaps, having used so much absorbent in the stables that no liquid whatever is lost. All manure should be applied to the land as soon as practicable after it is made, the practicability depending largely on the slope of the land, with possible losses from washing, particularly after the ground freezes.

Cover crops — valuable as they may be farther south, and in special farming — are of but little importance, in the relatively short seasons of New York, compared with the thick sods previously mentioned. Use them in all possible places as a supplement to, not as a substitute for, thick sods. In plowing down cover crops the furrow should always be left slanting, not turned over flat.

Anything is good as a cover crop if the seed and trouble of sowing and plowing under does not cost too much. Corn sown thickly has in some sections given excellent results. It furnishes a large amount of quickly decaying vegetable matter if plowed under while still sappy. It is usually best sown as soon after the regular planting season as one can get to it. By early September a good growth still in a sappy condition is secured; and, if plowed down, rye may be sown to advantage. On old ground rye may also precede, as well as follow, the corn. Other good non-leguminous cover crops are oats, buckwheat, rape, cowhorn turnips, rutabagas, etc.; in most cases, combinations of two or more of these, as buckwheat and rye, are better than any one of them. Even weeds are better than no cover crop; but, of course, caution should be observed to prevent their seeding. No single cover crop is best for all conditions or at all times on any farm.

On muck soils winter vetch is recommended as a cover crop after early season crops are removed, but it will not make growth enough to pay if sown after late crops are removed.

It will not pay to haul muck any appreciable distance for application to other fields, as the cost more than offsets the worth of the soil improvement.

The purchase of commercial forms of humus is not a practicable method of building up the productivity of the soil.

On steep, rough or stony fields, top-dressing to secure heavy sods is the most feasible plan, as tillage may be too expensive for the returns secured, and usually there are additional losses from erosion. Such sods may often be secured without plowing by discing a little — preferably with a cut-away disc — sowing grass seed, applying nitrate of soda (when not abnormally expensive), and rolling.

HUMUS IN ORCHARDS

If stable manure can be obtained at a reasonable price, or if the fruit grower who has it in his own stables feels that it will not give larger returns from other crops, a dressing of stable manure once in three or four years is a most desirable way to put humus in orchard soils. If the manure can be supplemented by an annual cover crop of oats, barley, or rye, plowed under, the fruit grower is doing about as much as cost warrants him in doing to supply humus to his land. If the stable manure cannot be obtained, a cover crop must be added. This should be a leguminous crop whenever possible. After years of planting first one combination and then another, the Geneva Experiment Station now uses in all the Station orchards the following practice:

On each acre is sown one bushel of oats or barley and fifteen pounds of mammoth red clover or twenty pounds of winter vetch. They feel that the money and time are largely lost if this crop is not put in by the first of August or a little earlier. There must be a considerable body of plant growth to turn under if the cover crop pays for the seed in its benefits to the orchard. Occasionally — once in four or five years — a crop of rape or cowhorn turnip is sown. Orchardists about the state have used other crops, such as rye, oats, rutabagas, etc., in similar manner with satisfactory results.

REPORT OF COMMITTEE ON FERTILIZERS

Presented by

PROFESSOR GEORGE CAVANAUGH

The fertilizer situation has not changed materially from what it was a year ago. There is still a shortage of potash and the other constituents are still high in price. The problem therefore remains one of getting maximum returns for the money expended for fertilizers, and of a more careful attention to fertilizer needs than seemed necessary before the war. Perhaps the matter may be best presented by discussing the general problem under the following well-known specific heads:

1. Sources of nitrogen
2. Sources of phosphoric acid
3. Sources of potash
4. Mixtures vs. single constituents
5. New fertilizers

SOURCES OF NITROGEN

It is well to continue the recommendation of using a small amount of nitrate of soda because of its well-known tendency to start crops quickly, even at the present high price.

Attention is also called to the use of cyanamid as a source of nitrogen. This material carries nearly 20 per cent nitrogen of a character that is quite readily available.

The nitrogen by-products of the meat industry, namely, dried blood and the various grades of tankage, will probably be the main supply of nitrogen in fertilizers.

During the past few years there has been some advertising to promote the use of dried muck as a source of nitrogen. When there is a muck deposit on the home farm or in the immediate neighborhood, where the material can be got out with labor already engaged and during a time when such labor is not otherwise employed, this material may prove a fairly good source of nitrogen. The muck might in some cases be mixed with small amounts of other fertilizers, as rock phosphate. On the other hand, the purchase of dried muck, which seldom carries over 3 per cent nitrogen, is not recommended.

SOURCES OF PHOSPHORIC ACID

In the case of phosphoric acid the question this year is the same as before: "Can we substitute raw rock for acid phosphate?" In this connection it is well to keep in mind that there are two phases of this question — the economic one and the agricultural one. Raw rock phosphate will not change its character or perform different functions because its price changes. The recommendations of last year may be continued. These were, in brief, that raw rock phosphate is to be recommended where it can be used with a sufficient amount of decaying organic matter. There may have been cases where it has given good results on soils poor in organic matter, but the weight of evidence seems to point to its most successful use when employed with stable manure or other forms of organic matter.

There is no basic slag being imported from abroad. A small amount is being made in the South, but its price — in the neighborhood of $30 per ton — is too high.

SOURCES OF POTASH

For all practical purposes we must continue to look to the soil itself for the potash supply. A small amount is being produced in the United States and some of the mixed fertilizers contain about 1 per cent. Considering the cost of the addition of this 1 per cent, it is doubtful whether it pays.

Wood ashes are an uncertain source of potash.

Certain potash silicates contain 8 to 10 per cent of potash in an insoluble condition. Their general use is not recommended.

MIXTURES VS. SINGLE CONSTITUENTS

The principal mixed fertilizer must consist of some nitrogen-carrying substance and acid phosphate. Where it is desired to use a mixed fertilizer rather than the separate materials, a mixture containing about 2 per cent nitrogen and 10 per cent or more of P_2O_5 would seem to be a good basic mixture.

The question frequently arises whether it is proper to mix acid phosphate and ground limestone where both are to be applied to the same soil. The following is suggested on this point:

1. The most desirable plan, where conditions permit, is to have limestone applied in the fall and acid phosphate in the spring.
2. If the fall application of limestone is not practical, then let the limestone be applied as early as possible in the spring, have it well worked into the soil, and apply the acid phosphate at the time of seeding.
3. Never mix acid phosphate with lime or limestone in advance of their application.

NEW FERTILIZERS

In the case of new materials of doubtful value, it is recommended that the institute workers take these matters up by correspondence with the Experiment Station or the College. This may result in the mutual benefit of bringing to the attention of the Station and the College workers these new materials which they may not have seen or heard, and of securing any information that either institution has on these matters or may obtain during the course of the year.

REPORT OF THE COMMITTEE ON FARM MANAGEMENT

Presented by

PROFESSOR A. L. THOMPSON

1. Owing to the exceptionally high prices that are prevailing during 1916, farmers should be cautioned about growing too large an area of any one crop next season. It is a safer and wiser policy to keep about the same balance between enterprises that have persisted in the region over a series of years.

2. The term "diversity" should be more clearly understood. Diversity not only means a balance between receipts from stock and crops, but it means a proper distribution of labor; a proper distribution of income throughout the year; good use of all land suitable only for pasture purposes; and good use of all products, such as poor hay, bean pods, corn stalks, and other material, with little or no market value. A farm located in a section of the state where the topography is rough, where the soil is naturally infertile, and where the growing season is short, should perhaps have a larger proportion of its income from stock and stock products than a farm more favorably located by nature. On the other hand, a farm located on level, fertile land, free from stone, near markets, with a long growing season, might derive nearly all of its income from crops and still do better than it would if larger amounts of stock were kept. While diversity is one of the essentials to successful farming, institute workers should not recommend the application of this principle until they are perfectly familiar with all the conditions in a region.

3. A strenuous effort should be made to interest more farmers in keeping some of the more simple farm records. This might well be made the principal farm management issue during the coming year. Special emphasis should be placed on the following:

Farm inventories

Survey records

Combined inventory, cash book, and summary for figuring labor income for five years.

Where dairymen are in a cow-testing association it is recommended that they keep a record of all costs other than feed on their dairy herd. This record together with the association's record will form a good basis for figuring cost of milk production in these selected herds.

Upon request, institute workers will be furnished for their own use, free of charge, inventory blanks and sheets for figuring labor income. Farmers can obtain forms for taking an inventory or for computing labor income free by writing to the Farm Management Department, Cornell University, Ithaca, N. Y. The book, including a farm inventory blank, blank for a survey record, and space for a record of each receipt and expenses for five years (256 pages), may be obtained by writing to the Cornell Cooperative Society, Ithaca, N. Y. The price of this book is $2.00, postage prepaid.

4. Institute workers wherever possible should be familiar with and should use locally the results obtained from farm management demonstration work. In using these results, institute workers will have facts from nearby farms illustrating local conditions, and the farm bureau managers will have help in getting these results before the people. Results of this work can be secured by writing to the Farm Management Department, Ithaca, N. Y.

5. In presenting figures on farm management work it is advisable that charts be used as much as possible. These should be presented one at a time and no more charts should be used than are necessary to illustrate the point.

REPORT OF THE COMMITTEE ON FARM CROPS

Presented by

D. P. WITTER

CORN CULTURE

It is too early to make any statements relative to the seasonal observations on silage corn tests, owing to the fact that the dry matter has not yet been determined. Seasonal conditions were such as to render this line of work almost negative as regards adding anything new to the 1915 observations. Generally speaking, however, we have not yet secured sufficient evidence to convince the majority of farmers that early-maturing types of silage corn are more profitable than late-maturing types. Further, it is imperative that a large number of the so-called varieties of corn offered for sale each year, be eliminated. These are largely old varieties with new names, and add considerably to the confusion of the farmer. Variety tests should be continued and should be made as uniform as possible throughout the state.

It is safe to say that the variety of corn that will come to the period of denting or searing in any locality, and which contains the largest amount of dry matter, is the most profitable to grow.

POTATO CULTURE

There is likely to be considerable interest in the inspection and certification of seed potatoes during the coming year. This is a matter that should be given attention by institute speakers in localities where potatoes are extensively grown.

The New York State Potato Growers' Association has this season been carrying out an inspection of seed potatoes for such members as desire it. The expense of the inspection is borne by the association, and fees sufficient to cover this expense are charged to the growers. An application fee of two dollars is required, and in case a certificate is issued an additional fee of one and one-half cents a bushel is charged for all potatoes sold under the certificate. Three inspections are to be made; two during the growing season and one after digging. The inspectors are appointed by the president of the association, on the recommendation of the department of plant pathology of the College of Agriculture. Mr. R. M. Haskell has served as inspector this year. All certified seed is to be shipped in new bags holding 165 pounds. The aim is to make it possible for the buyer to trace the seed to the grower, and fix the blame if anything is wrong.

Information in regard to certification may be obtained from the secretary of the association, Prof. E. V. Hardenburg, Ithaca, N. Y.

In general, there are too many varieties and types of potatoes being produced in this state. Seed buyers from Long Island, New Jersey, and further south are looking to New York to furnish a part of that seed supply which Maine has furnished in the past. Before the New York grower can successfully meet this demand and at the same time improve the general marketing of his potato crop, three things are to be encouraged: first, the recognition that potatoes may be grouped into eleven well standardized families, having characteristics, conformation of tuber, habit of growth, and each its adaptation to certain local soil and climatic conditions; secondly, the elimination of the many so-called varieties and the concentration of effort on the production of only a few standard varieties of the early group and the late group which seems best adapted to a given locality; and thirdly, the community selection of high yielding strains of seed from the above best varieties in order that eventually the growers of the locality may have good foundation seed stock to use in the organization of a local seed association. In this way the locality should soon establish a reputation among seed buyers for its own special brand of seed or table stock.

Concerning the diseases of potatoes, mosaic is giving much trouble in the inspection and certification of seed potatoes. In the potato fields of Maine and northern New York, mosaic is very common, particularly in the Green Mountain type of potatoes. Mild cases may be difficult to detect, yet the progeny of mildly affected plants may be worthless dwarfs on Long Island.

The mosaic is a disease, transmitted through the seed tubers, in which the leaves are faintly mottled with yellow, and wrinkled. In severe cases the plants are worthless dwarfs. A bulletin prepared by Professor F. C. Stewart, of Geneva, entitled "Observations on Some Degenerate Strains of Potatoes," will be ready for distribution soon and should be in the hands of speakers on that subject.

BEANS

The low yield of beans, especially in the western counties, has been a question of study among growers, and special funds for investigation will be asked from the legislature the coming winter. There has been a diminishing yield in this section for some years. During 1916 weather conditions that were especially unfavorable have reduced the yield very much. Added to this is root rot and other diseases. No remedy has yet been found for the root rot.

Until we know more about the cause of low yield of beans, it is safe to advise rotation of crops — not growing beans on the same land oftener than once in four or five years. On soils that need it, use lime and acid-rock phosphate in fairly liberal quantities, and select seed from high-producing plants that are disease-free and resistant.

OATS

There are three things that should be impressed on all with regard to handling the oat crop.

1. More work should be done to improve the yielding power of the standard varieties. This can be permanently done only by seed selection within the variety. It is important to standardize the varieties and impress the desirability of a majority of farmers in a section growing the same variety.
2. Fertilizing the oat crop seems to resolve itself into a judicious use of acid-rock phosphate at the rate of 150 to 300 pounds an acre. Slight additions of nitrogen should be made only where the soil is markedly deficient in this element.
3. The control of oat smut should be urged by the usual methods of treating seed with formaldehyde. This work should be increased during the coming year.

SWEET CLOVER

Whether this crop becomes generally economically important remains to be seen. That it has a place in sections where alfalfa may not be grown is evidenced by the numerous good reports from those handling the crop. Its liming and inoculating requirements are almost as exacting as for alfalfa.

The rate of seeding seems to be about the same as for alfalfa. If the crop is to be grown as hay it should be seeded with grain in the spring.

MEADOWS

Aside from the customary methods of top-dressing new seedings with farm manures, there seems to be no good practice for improving meadows except with chemical fertilizers.

With short rotations, leaving the meadows in grass two or three years, it is generally profitable to top-dress meadows with a suitable mixture of fertilizers, particularly for the last one or two crops of hay. Nitrate of soda, 150 to 200 pounds, and acid-rock phosphate, 150 to 300 pounds an acre, should make an economical dressing.

Impress upon farmers that the cheapest timothy they grow is that which is fed on decaying clover roots. In other words, the first requisite for economical growth of timothy is successful clover growing.

PASTURE IMPROVEMENT

The fundamental difficulty with the majority of pastures is their lack of organic matter. Contrary to the usual expectations, the soil of old pastures when plowed indicates by its appearance that humus is present in only small quantities. In most pasture fields only a little humus-making material returns to the soil, because they are grazed too early in the spring, too late in the fall, too continuously during the season, and also because the stand of grass plants is usually far too thin — this last condition being due in large part to the three practices mentioned.

First of all, great care should be exercised in grazing pastures. In pastures that can be plowed and cropped it is comparatively easy to increase the stand of desirable grass plants by growing a tilled crop and then seeding down with a nurse crop, following the usual practice in the section. In such cases, limestone (about 2,000 pounds per acre) and acid phosphate (200 to 400 pounds per acre) should be used. The seeding mixture should be so compounded as to furnish pasture continuously during the season, and when the compounding is done the soil and climatic conditions must be carefully considered. A pasture so seeded should preferably be cut for hay the first year after seeding, and it must always have a large growth before it is grazed.

Where plowing is inadvisable, growth is enhanced by using as top-dressing, together or singly as conditions indicate, not to exceed 1,000 pounds of ground limestone and about 100 pounds of acid phosphate per acre. Stands may be thickened by using about 10 pounds per acre of a suitable seed mixture. Such mixtures should be sowed preferably in early spring when the ground is open with frost, and should be made two or three years in succession. About the only feasible method of improving wet pastures that cannot be plowed is to sow seed in early spring as suggested above. When pastures are thus seeded they should not be grazed until late in the season. Otherwise, the young grass plants do not get sufficient start to withstand the trampling and feeding of the animals.

As samples, the following seed mixtures and quantities per acre are presented:

FOR GOOD LAND		FOR POOR LAND	
Timothy	10 lbs.	Timothy	10 lbs.
Kentucky Blue	4 lbs.	Redtop	4 lbs.
Orchard Grass	4 lbs.	Canada Blue Grass	4 lbs.
Meadow Fescue	4 lbs.	Red Clover	4 lbs.
Canada Blue Grass	4 lbs.	Alsike Clover	4 lbs.
Red Clover	4 lbs.	White Clover	1 lb.
Alsike Clover	4 lbs.		
White Clover	2 lbs.		

On wet lands redtop should constitute the greater portion of the mixture and may be sowed alone with satisfaction. Fowl meadow grass also may be used to advantage. On very dry lands brome grass and tall oat grass are valuable.

ALFALFA

In many sections where physical conditions of the soil seem to indicate that alfalfa should thrive, yet experience has proved that it does not, some of the recently developed hardy varieties may be the key to the situation. Farmers who have had this experience should persist until they have tried out in a small way some of these varieties. Varieties under the name of Grimm, Baltic, and the like, are fairly available now. The United States Department of Agriculture is also propagating a number of varieties with prospects of ultimate success. These are not yet available to the farmer, but no doubt some of them will be in the near future.

CLOVER

If farmers can be stimulated to do the very best they know how in growing clover, we shall have accomplished a great deal. Only good seed should be used, accompanied by good drainage and the use of lime and inoculation whenever necessary. The great value of clover should be emphasized.

SOY BEANS

Advocate the culture of soy beans in those sections where corn may be grown. They may be fed to cattle, sheep, or swine.

Sow slender-stemmed varieties for hay, such as Ito San, Early Brown, Hollybrook, and Black Beauty, using one to one and one-half bushels of seed an acre, drilled solid.

For seed or silage fodder use more branching, stocky varieties, of which Medium Green is a sample, using one-half to three-fourths bushels an acre, in drill rows twenty-four to thirty inches apart. Cultivate enough to destroy weeds. Inoculate the seed if soy beans have not been grown on the soil before.

For planting in corn rows, use from four to eight quarts of seed an acre with the usual amount of seed corn mixed before planting, or else drop from a separate box on the planter, or as a separate operation with a stab planter. If soy beans are planted on high land, with large, leafy varieties of corn, the amount of seed corn should be lessened to not more than eight quarts an acre. Medium Green soy beans seem most desirable for that purpose.

MILLETS*

Advocate the culture of millets where there is need of a supplementary hay and silage crop and the season is warm and short. Millets add variety to the ration for horses and cattle, but should not be used exclusively for the roughage part of the ration. Ripe, or nearly ripe, millet that contains seed should not be fed to horses.

There are four varieties of millet that should not be confused: 1. Common millet is adapted to late planting, or to very short seasons; is somewhat drought resistant and better adapted to poor soils than the larger kinds. The seed is oval in shape and yellow in color.

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*See Bulletin 87, "Grasses and Legumes in New York State," Department of Agriculture, Albany, N. Y.

2. Hungarian millet requires a little longer season than common millet, and on a favorable soil will produce a heavier yield. The seeds are part yellow and part dark purple.

3. German millet is a late variety adapted to rich soils and a longer season than either of the two preceding kinds. It will not stand drought so well. It is so coarse that it is better for soiling than for hay. The seeds are very small and all yellow. It is not generally well adapted to conditions found in New York State.

4. Japanese millet differs from the preceding varieties in having a branching head like barnyard grass, whereas the other three have round heads like foxtail grass. This variety has a coarse stalk and abundant foliage. If sown thickly enough it can be made into hay, but it is not recommended for that purpose. It is better adapted for soiling and silage purposes, and is deservedly popular with the farmers on the hill farms of Central New York. It is recommended for mixing with corn fodder in the silo, in the proportion of one-half each, where it is difficult to cure for hay. It may be grown for its seed crop, harvested with a self binder, and, after the seed has been threshed off of the straw, fed to stock.

WOMEN'S SECTION OF INSTITUTE CONFERENCE

FRIDAY MORNING SESSION

The Women's Conference of the Normal Institute opened Friday morning in Room 262, of the Home Economics Building, Ithaca, New York. Its meetings were conducted by Mrs. Ida S. Harrington, of the staff of the Bureau of Farmers' Institutes.

ADDRESS TO WOMEN INSTITUTE WORKERS

DIRECTOR EDWARD VAN ALSTYNE

Of our women's work, I may say frankly, that I have no criticism and few suggestions. You have builded better than you knew, and you have made every effort that lay within your power. I wish only to tell you that I believe our women's work to be the most important of any that we are doing, for the need among rural women today is greater than the need among rural men. The men have been brought in contact with life beyond the farm. Outside agencies have touched them rather closely, and even in the most isolated community the man has opportunity to get out and mingle with his fellows.

Many a time I have seen a man and his wife start out on about the same plane, and I have met them years afterward when well past middle life, in public and at home, and the man has left the woman far behind. Meagre and superficial though his contact with the world has been, it has contributed toward his development through the years, while his wife, confined to the narrow environment of the four walls of the home, has succumbed to the inevitable. To be sure this type of woman is not so numerous today as she once was, although in the back country are still to be found most pathetic and hopeless cases of differences between women and men. One influence that has done most to change this condition is the grange. Where the grange has come, you no longer find cast down and retiring women, but women alert and intelligent, standing side by side with their husbands and abreast of the times. The truth of this statement would impress itself on you if you visited grange and non-grange communities and made a study of the contrast.

There are communities in New York State that seem all but hopeless. Everywhere among them we find poor fields and lack of capital. It is a puzzle to know what encouragement we can hold out to such sections, but perhaps our greatest kindness is to minister to their people and do the best we can to entice them away. I remember Governor Glynn once said that he hoped some time to see a farmer on every abandoned farm in the state. Now the truth of the matter is that there are thousands of acres that ought never to have been taken up. At best they can never yield but a scanty living, and the farmers who would glean such a living could come into the centers where there is a crying need for labor and workers and render worth-while service, letting their acres grow to grass and woodland. How otherwise can such outposts, so completely isolated from civilization, give us boys and girls who are to do credit to our race? Indeed, they often live in a paganism greater than that in many parts of China and India.

Two or three years ago, on the way to the Rural Life Conference at Syracuse, I consulted Bishop Nelson regarding a statement I had planned to make in my talk on rural citizenship. My statement was, "Isolation now means deterioration," and I said to the Bishop, "If it is too strong and you are not willing to endorse it, I will not make it." His answer was that the statement was not so strong as it might be. So I have felt free to ring the changes and to emphasize the social and civic side of our institute work, and more especially our work among the women.

To be sure there comes a danger in ringing the changes that it may be done to excess, and I have wondered whether this were being done in my own case, whether we were going too far in giving up the evening meeting to a consideration of civic and social conditions. So in some places I have deliberately planned the evening program to include lectures on the technical farm subjects and almost invariably the protest has come, "Why farm subjects, why soil and chickens and horses, when we might be having inspiration for the highest living?" I firmly believe that the people are not receptive to the scientific work in the evening, that they are looking for something higher and something better. I believe further that it is worthless for us to spend our time, and for the state to spend its time and money, in enabling the people of the farm to increase their worldly goods if we do not instill in them thought for enabling their worldly goods to help them better to enjoy the truer and deeper meaning of life.

From this viewpoint, the success or failure of the institute work depends preeminently on our institute workers, and of them requires at least two qualifications: first, the ability to enter into thinking the thoughts and speaking the language of those to whom they minister, to understand innately the handicap of lack of funds and lack of training; and secondly, to realize that their first duty is to the man in need spiritually, physically, or financially, rather than to the man of wealth and comfort. Let it be the province of the institute worker to bring to men and women on the farm who are not otherwise brought in touch with other lines of advance thought, a leaven to reach after better things. It is the people way back whom I have in my heart, and ours is still a work of pioneering, pioneering not only in isolated country districts, but in isolated villages, for the plight of the village woman is often worse than that of the farm woman — she has less to occupy her time and thoughts.

You have done nobly in the past. I do not need to ask you to keep on striving, but let me say for your encouragement that despite the fact that the bad weather reduced the numbers who attended the institutes last winter by ten per cent, the attendance of women alone increased by 1,300. It was harder for the women to come than it was for the men, and they came, I know, because they got something from you — something to live by in the months that followed. When a woman is inspired, the hope for her own and her family's future is infinitely greater than when the man alone is inspired. If he comes home with enthusiasm that meets no response from his wife, nothing comes of his inspiration. He sinks back again in hopeless depression, since understanding and appreciation are utterly beyond her ken, and the sordidness of life lapses over him until perhaps a comparison of his home and stable would be in favor of the latter.

To you, then, is given the greatest of all tasks and perhaps the greatest of opportunities — to carry a message and inspiration to the women who are far back.

MRS. HARRINGTON: I sometimes feel appalled when women say to me, "What is there left to do in New York State?" It seems futile to try to explain to them that even in New York there are still many women who cannot read or write, that sour bread is served in many of the homes one visits, that too large a number of women practice no other method of cooking eggs than by frying in grease for 20 or 25 minutes. But I do tell those who ask how some of my women correspondents have made a circuit of thirty miles in order to convey to the women farthest back that the institute worker is coming to them with a message, and of the sacrifices that they make and misgivings that they feel in attending.

EXPERIENCES IN FOLLOW-UP WORK

MRS. ORRA P. PHELPS

My experiences were most varied and in some cases most amusing. Many times the hall was crowded with babies, and they did not sleep all the time I was talking. I recall one day when a mother did her best to comfort an infant with banana, cooky, and the bottle by turns, but still it fretted. The reason became clear to me in the intermission between the sessions when she confided that she had applied whiskey and salt to heal a scratch that had been contributing to the babe's discomfort all the morning.

The demonstration work, it seemed to me, was a revelation to most of the women. It was attended with difficulties, to be sure, but on the whole all things worked together for good. For my first work I started out on a glorious morning. My correspondent in this case was a teacher who assured me that I should find all things in readiness for my coming at the hotel where the demonstration was to be held. I had planned that my demands should be modest, and I had written ahead for what seemed altogether necessary. At the hotel, I asked first for a mixing bowl, but learned that I must content myself with a long-handled saucepan. I asked for a flour sieve and received a gravy strainer. I asked for scales and a measuring cup, but these were not to be had either at the hotel or at the three stores in the town. No pan was available, but an angel-cake tin served the purpose admirably At least one lesson was demonstrated to my satisfaction that afternoon — that with or without the equipment called for, my " new " recipes would work just the same. The women could not say to me, " I cannot do it because I have not the utensils to work with that you have."

My audience gathered. One by one they came, but with them no butter and no bread. So we waited, and I discoursed, waiting by the minute for the provisions and wondering how long my fund of information could continue. Finally the butter and the bread arrived, but the cheese was not in their company. It lived three miles away, I was told, and was just starting. The audience came and went, but I talked on, and in the end fortune favored me. We had a wonderful souffle and cheese dreams, the odor wafted out, and a goodly crowd were with us on the finish.

Everywhere the women marveled that white sauce could be the foundation of so many dishes. Certainly it developed for them imagination in the preparation of food and the varying of their family menus and gave them a wholesome respect for the everyday products of the farm. I also found that the demonstration work was equally as acceptable in a mixed audience as it was among women alone. Furthermore, it interested the men in obtaining for their wives proper equipment, and more than once a man approached me at the end of the demonstration to inquire what he should ask for next time that he went to town.

From every viewpoint the work was worth while, and my one hope is that it can be carried on in a larger way this coming winter. If we did nothing more than improve the bread in New York homes, we should be doing a remarkable work. One opportunity that would afford us an easy means of approach to this subject, it seems to me, would be through inspiring enthusiasm for the junior project school credit work in home economics, which is now being offered by the State Education Department. By giving publicity to this phase of the school work, we not only aid the work of the Education Department, but we offer an added incentive to mothers who are ambitious for their children's good to attend our teachings on the subject of bread-making the more carefully.

EXPERIENCES IN HEALTH WORK

DR. LUCIA E. HEATON

Speaking generally, the health record of the rural districts is not so good as that of the cities. To be sure, the comparison may be unfair to the country, since no statistics have ever been tabulated separately for villages of fewer than 8,000 inhabitants. The health of such villages is very far below the standard, and being reported as a part of the record for the open country, tends to lower the statistics of the latter, and the rural people suffer by comparison.

It is not surprising that the health record of small villages should be low. The village is in most cases too small and too poor to afford an adequate system of sewage disposal, and the horse and pig and cow live in too close proximity to the family water supply and the family home to provide favorable health conditions. In fact, the village combines all the privations of the open country with the disabilities of city life.

The hope for the future, however, is greater than it has ever been before. For three years the Health Department has been giving a bi-yearly physical examination to school children in all country districts, and wherever the findings have given evidence that the record is unusually low, a yearly examination has been made and an investigation of living conditions conducted. In case no acute illnesses have been prevalent, the district is not visited until the second year following.

Another movement that is fraught with wonderful possibilities for the improvement of the health of rural communities is the program for military training that has recently been adopted. The only danger that must be guarded against in this connection is the danger that children may be physically overworked, but this danger is not more serious than that which may arise in the case of the father's evening frolic with his children, when he forgets their lack of strength in comparison with his own. Under careful supervision, however, the plan for physical training will greatly contribute to the strength of the nation.

The fact that health work in the rural districts is coming to be properly recognized as an important phase of the activities of the Health Department is very encouraging after the many years that we have been striving to give a single lecture in comparatively few of the outlying country districts, at intervals of perhaps two or three years. We can comfort ourselves with the thought that scattered though that work may have been, it was pioneer work, and we set the people to thinking on such subjects as "The Fight Against Tuberculosis," "The First Year of a Baby's Life," "The Influence of Heredity," "Home Nursing," "Heating and Ventilation," long before those subjects had been given the much needed publicity they now are receiving.

Yet, thorough as is the health work that is being done today, there is still need of pioneering. We as institute workers will find the mothers of a community most earnestly interested in improving the health conditions that obtain in rural schoolhouses and in the moral safeguarding of their children at school. In the course of some of my lectures we have made a trip to the schoolhouse and considered whether or not the arrangement of desks was most advantageous for purposes of heating and lighting and the avoidance of draughts. In one such instance we found the windows of the schoolhouse painted shut, so that for something over a year ventilation had been out of the question. My whole experience has had the effect of making me wish that there were more women on rural school boards, and I believe that in the future there will be.

We shall find the mothers equally interested in learning how best to teach to their children the principles of the renewal of life. They will respond most earnestly to instructions from the lecturer on the prevention of preventable diseases. I have sometimes found it profitable to inquire whether there have recently been epidemics in the locality that I am visiting, and to discuss the best methods for combating it.

Another subject on which the institute worker can speak to advantage is on the subject of home nursing. Such simple demonstrations as the turning of a patient with the draw sheet, which may be easily illustrated through the medium of a book for a bed and handkerchiefs for sheets prove most worth while. The teaching that a room must be arranged so as to avoid draught and get air, that light will be admitted and still not try the patient's eyes, that a kerosene stove produces worse results than a cold room — all of this teaching is distinctly worth while. It would also be worth while if we could give to these women an insight into simple household remedies that could be utilized instead of patent medicines that are found at the drug store.

The mistake that the institute worker must not make is in any way tending to give an opinion on a technical subject. Her province is to furnish only general information that is up to date and to make it clear without overstating or tending to exaggerate. She may also find it desirable to introduce in each locality its own vital statistics as compiled through the Health Department, thus interesting the people in health conditions as they are and as they ought to be, and to urge that the "Health News" and other reliable papers and magazines bearing on health subjects be subscribed to by local reading-rooms and libraries.*

FRIDAY AFTERNOON SESSION

THE FARMER'S WIFE AND THE EXTENSION WORKER

PROFESSOR MARTHA VAN RENSSELAER

Before formulating our plans for extension work for the year, we spent three weeks of our vacation in a little New England farmhouse, where we could demonstrate to ourselves the possibility of a farm woman's directing her life instead of admitting its barrenness to herself and submitting to the inevitable.

The farmhouse was of the usual old-fashioned type. The inconvenience of its arrangement was almost ideal for the purposes of an experiment, and the difficulties encountered in managing the water supply and the cookstove presented practical problems. We began our experiment with interest and enthusiasm. We planned to use the whole house in our housekeeping, and to enjoy the mountains, the woods, and the fishing in our recreation.

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* In the discussion that followed Dr. Heaton's address it was pointed out that the institute worker must not in any way shake the confidence of the people in their local physician; that rather they should put their emphasis on the promotion of conditions that would induce health, such as good food and fresh air. It was suggested that the discussion of ailments be discouraged and the thinking of "well thoughts" encouraged.

Very soon we discovered that the large living room was cold and uncomfortable to sit in. It made the rest of the house cold so we shut it off. Then we thought there was no use in changing our outing clothes for house dress unless we had company, and our effort could be appreciated. Next, the dining room seemed chilly at breakfast time, and we found it cozier to eat by the kitchen fire. Still nothing seemed quite right. The mountains and the woods were always interesting, but we weren't entirely happy. Then we discovered that the dark blue calcimining in the kitchen was disturbing our peace of mind. We bought some paint and renovated the kitchen. That helped considerably, and we settled down to a happy vacation.

The farm home has some different needs from other homes, because of isolation and because of manifold demands made upon the farmer's wife. We confess to a full understanding of the reason for building the farmhouse close to the road. Every time we heard wheels we ran to the window and peeked out to discover whether we knew the people who were passing and whether they were driving into our yard.

The terrors of isolation are overestimated, because they may be relieved by interesting labor and recreation. If the work in the farm home is not organized and is not attended by labor-saving equipment, we can scarcely expect much advance in farm-home housekeeping.

The time of the farm worker, man or woman, needs to be freed to permit inclination and time for recreation and amusement. No life is efficient or contented without these. They prepare one for harder labor, and contribute to the elasticity of mind and body. "Be ye transformed by the renewing of your minds" seems to be a pure and simple injunction to resist the frigidity of old age and the danger of introspection. An occupation should not brand itself upon the individual. It is necessary for the farm woman to get away from the routine frequently enough to be impressed by outside conditions. She thus has more of life. To bring up children well, one must first live in the world that they must resist and enjoy.

Recreation that includes play gives freer use of muscles and nerves, which, if neglected, decay for want of use. If play is omitted, routine and monotony follow, for the muscles habitually used in work act over and over. There is then a tendency to one-sided development.

The business of the extension worker should be to teach not only what is right in food, clothing, and shelter, but also what is right in recreation, rest, and exercise. We may therefore reasonably devote some time to the teaching of games and the means of securing right recreation.

Young persons particularly crave change and amusement, and naturally seek it wherever it is most easily and successfully afforded. An extension worker may as profitably prepare herself to help in the problem of a happy countryside as to teach simply the material aids to good digestion and shelter.

The business of farming when scientifically conducted appeals to men through more avenues than the method of doing things. Farm housekeeping to be at its best needs the same background of scientific interest as farming. Country girls should be encouraged to learn more about the business of both homemaking and farming. Neither men nor women will continue happily in a business that presents nothing but work. There must be something in life besides that.

Our extension teaching should give consideration to budgets from the home as well as from the farm standpoint. The cost of household labor, equipment, and supplies should be carefully discussed.

A long list of practical subject matter is needed in our extension work, such as a study of dietaries, cookery, home-planning and furnishing, care and feeding of the family, and various other subjects. But I have tried to touch upon fundamental needs in the life of the homemaker other than these, however,— the need for recreation, for study, and for an economic program of the housewife's time, labor, and production.

We are endeavoring at the college to help the student of home economics who wishes to prepare for extension work and who would learn more of the field and methods of presentation. The course does not include the acquiring of subject matter, which is secured in other courses, either at the college or elsewhere, but opens the field of extension to the student for practice and a study of methods.

NEW LIGHTS ON FEEDING PROBLEMS

PROFESSOR FLORA ROSE

You who are doing work in the field are necessarily separated from many of the sources of new lights on nutrition. We who are located at the college center are in a position to be in touch with such sources of subject matter, and are responsible for giving to you that which is available. During the last two years, experimental work in nutrition has been put on a sound basis, and many excellent and readable articles have appeared with which the field worker is by duty bound to be in touch. The following is a brief list of such publications, which are worthy of study, and many of which should be in the hands of extension workers who are attempting to speak on the subject of the dietary:

1. Feeding the family. Mary Swartz Rose. Macmillan Company, New York City.

   This is a very valuable book for the use of teachers, extension workers, or housekeepers.

2. Food products. Henry C. Sherman. Macmillan Company.

   This is a valuable book for reference on foods.

3. The present situation in nutrition. (A series of four articles.) E. V. McCollum. Hoard's Dairyman, Fort Atkinson, Wis. July 21, 28, August 4, 11, 1916.

   This series of articles should be obtained, since it comprises a summary of the most recent work on nutrition. The cost of single copies of the *Dairyman* is seven cents.

4. Newer points of view regarding the part played by different food substances in nutrition. Lafayette B. Mendel. Journal of the American Medical Association, 535 North Dearborn St., Chicago, Illinois. Vol. 63, No. 10. 1914.

   Single copies of this journal may be obtained for 17 cents. This article is excellent and should be purchased.

5. Nutrition and growth. Lafayette B. Mendel. Journal of the American Medical Association, Vol. 64, No. 19, p. 1539. 1915.

   This copy of the journal is valuable.

6. The Journal of Home Economics. Station N, Baltimore, Maryland.

All home economics teachers and extension workers should be subscribers to this journal and should try to date their subscriptions back for the past year, since a number of valuable articles have appeared in the journal during that time. The price of the journal is $2 a year, and single copies may be obtained for 25 cents plus postage.

A very short list of articles that have appeared in the journal this year and that are of special interest to teachers of food and nutrition are given here to show the value of material contained in the journal:

(a) A study of condensed and evaporated milks. Bengston. Vol. 8 (1916), No. 1, p. 29.
(b) Mineral nutrients in practical dietetics. Forbes. Vol. 8 (1916), No. 3, p. 122.
(c) Food selection for rational and economical living. Langworthy. Vol. 8 (1916), No. 6, p. 313.
(d) Standardization of cooking temperatures. Stanley & Wallace. Vol. 8 (1916), No. 8, p. 429.
(e) The war and dietetics. Wheeler. Vol. 8 (1916), No. 9, p. 488.
(f) Increasing the iron content of the diet. Hunt. Vol. 8 (1916), No. 11, p. 584.

7. The Experiment Station Record. States Relations Service. U. S. Department of Agriculture.

The government issues the following statement in connection with the cost of the *Record* and the persons to whom it may be sent free:

"The *Record* is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It cannot be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at $1 a volume."

Every teacher and experiment station worker should subscribe for this *Record.* It is not possible to own all the valuable material that is published on the subject of nutrition, nor is it possible for the average person to attempt to read any large number of the original articles. In the *Record* will be found well-prepared abstracts of much of the important current literature on foods and nutrition. A very short list of abstracts of some important articles is appended. This list is a mere beginning of the large number of valuable abstracts contained in the *Record.* "E. S. R." is used to refer to the Experiment Station Record in the following:

(a) Clinical calorimetry. IV. The determination of the basal metabolism of normal men and the effect of food. Gephart & Davis. Original article, Archives Internal Medicine 15 (1915), No. 5, p. 835.

Abstract E. S. R., Vol. 34, No. 1, p. 68, 1916.

(b) The protein need of infants. Hoobler. Original article, American Journal Diseases of Children, 10 (1915), No. 3, p. 153.

Abstract E. S. R., Vol. 34, No. 1, p. 68, 1916.

(c) Experimental pellagra in the human subject brought about by restricted diet. Original article, Pub. Health Rpts. (U. S.) 30 (1915), No. 47, p. 3336. Prevalence of pellagra. Original article, Pub. Health Rpts. (U. S.) 30 (1915), No. 43, p. 3132. Prevention of pellagra. Original article, Pub. Health Rpts. (U. S.) 30 (1915), No. 43, p. 3117.

Abstract of all three articles E. S. R., Vol. 34, No. 3, pp. 258–259. 1916.

(d) The nature of the dietary deficiencies of rice. McCollum & Davis. Original article, Journ. Biol. Chem. 23 (1915), No. 1, p. 181.

Abstract, E. S. R., Vol. 34, No. 4, p. 367. 1916.

A very valuable article, well condensed. Should be owned by all interested in nutrition.

(e) The essential factors in the diet during growth. McCollum & Davis. Original article, Journ. Biol. Chem. 23 (1915), No. 1, p. 231.

Abstract, E. S. R., Vol. 34, No. 4, p. 368. 1916.

(f) The cause of the loss of nutritive efficiency of heated milk. McCollum & Davis. Original article, Journ. Biol. Chem. 23 (1915), No. 1, p. 247.

Abstract, E. S. R., Vol. 34, No. 4, p. 368. 1916.

(g) The nutrition of the school child. Brown. Original article, Journ. State Med. 23 (1915), Nos. 11–12, pp. 329–353.

Abstract, E. S. R., Vol. 34, No. 6, p. 561. 1916.

(h) The resumption of growth after long-continued failure to grow. Osborne, Mendel, Feny, Wakeman. Original article, Journ. Biol. Chem. 23 (1915), No. 2, p. 439.

Abstract, E. S. R., Vol. 34, No. 6, p. 562. 1916.

(i) The nutritive value of boiled milk. Daniels, Stuessy and Francis. Original article, Amer. Journ. Diseases Children 11 (1916), No. 1, p. 45.

Abstract, E. S. R., Vol. 34, No. 7, p. 659. 1916.

(j) Acidosis and some factors which influence it. Lang. Original article, Biochem. Journ. 9 (1915), No. 4, p. 456.

Abstract, E. S. R., Vol. 34, No. 8, p. 763. 1916.

(k) A sanitary study of condensed milk. Park Schweder & Bartholon. Original article, N. Y. Med. Journ. 102 (1915), No. 22, p. 1073.

Abstract, E. S. R., Vol. 35, No. 4, p. 366. 1916.

SATURDAY MORNING SESSION

HOW CAN WE MAKE OUR WORK FOR THE FARM HOMEMAKER MORE PRACTICAL?

MRS. DELLA A. JONES

In my judgment we have three strata of women —

1. The progressive women who are active and thrifty and ready for new things from year to year.
2. The comfortably satisfied women who live from week to week.
3. The women whom we hesitate to call a lower type, but who, we must admit, are women merely living from day to day.

In the third stratum are the women for whom we are working the hardest, the women whom we must bring up to the level of the woman who is working with a purpose in view. If our work is to have a practical value, we must understand this type of woman, although at the same time we must not forget either of the others.

One's best opportunities to come to an understanding of women, it seems to me, are often to be had when one least expects them. Sometimes at the grange halls, while the women have been getting supper, I have sat with my crocheting merely amusing myself until it came time for my lecture, and during that time just by visiting a little as opportunity presented itself and perhaps asking questions that gave me a key to their interests, I have come to know the women of the community better than I could have done by watching them through a dozen lectures. Furthermore, that little visit seemed to inspire their confidence in me. I believe that there is no other means of making our work for the farm woman practical than by studying her viewpoint and shaping our extension work accordingly. Our work is an important one, for when we have raised our womanhood we raise our manhood. May I suggest as our motto for the coming winter, "Better homes, better communities, and a better nation."

JUNIOR WORK IN HOME ECONOMICS

MISS CLARIBEL NYE

In order to assist teachers in the rural schools with the problem of furnishing training in agriculture and homemaking for pupils living in the open country, the Education Department in cooperation with the State College of Agriculture presents a plan for directed school and home study and supervised home work in elementary agriculture and homemaking. These school and home activities are to center around definite lines of work to be known as projects. To differentiate between the high school agricultural and homemaking projects supervised by special teachers and the more elementary work, the former will be known as "senior projects" and all similar but more elementary work as "junior projects."

Junior projects are planned for pupils above the sixth grade or twelve years of age or older. Such pupils may undertake any project authorized by the State Education Department and approved by the district superintendent for his or her district or school.—*University of the State of New York Bulletin to the Schools* for March 1, 1916.

We have been endeavoring to develop the rural education work in home economics in such a manner as to give it a sound educational basis, and this the State Education Department has materially aided us to do. New York State is the first state to give regents' credits for junior projects in homemaking, and the courses are so planned that even pupils who have given up school can take advantage of these courses in their own homes. In every case the parent is required to sign a card giving the child permission to take the course and promising to cooperate in the purchase of materials. This makes the work of the teacher easier, since understanding of the project on the part of the parent and his or her cooperation are secured at the same time.

Teachers in the rural schools are urged not to hesitate to undertake the project work on the ground that they have no background for such teaching. Minute directions are sent out from the Rural Education Department of the State College of Agriculture from month to month. These directions are so clearly given that there can be little difficulty in following them. Teachers should also bear in mind that they are not expected to teach the technical phases of the work, and that a worker from the college will endeavor to visit them and aid in organizing the projects if the request is made some time in advance. Home economics workers are likewise available for lectures and demonstrations at teachers' institutes and training schools. All inquiries should be addressed to F. L. Griffin, Junior Extension Director, Rural Education Department, Ithaca, New York.

Much encouragement can be given the introduction of project work in home economics through the holding of bread-making and cake-making contests at the school fairs. We have been glad to attend such contests for the purpose of judging the bread, provided the children who made the bread are in attendance to learn why the loaves are scored as we score them. At a contest I attended lately, I found 700 out of 1,200 loaves slightly sour, yet, to all appearances, many of the loaves were excellent.

Thus far we have two projects in homemaking — a project in foods and one in clothing. The former may include the canning of fruits and vegetables, the making of bread, and egg, cheese, and milk dishes, and the cooking of meat. Both projects are briefly explained in the following outline issued by the Rural Education Department:

JUNIOR HOMEMAKING PROJECTS

Project in foods. The aim of this project is to teach by study and practice, some of the fundamental principles of cooking and serving; the selection of certain foodstuffs; their value and place in the dietary; and their preparation and serving.

The project student is to do all of the work required in the preparation of foods, but may receive assistance in the interpretation of the directions from parent or teacher.

The home practice work in foods will consist of the preparation and use of the following groups of foodstuffs: (1) vegetables; (2) meats; (3) milk, eggs, and cheese; (4) breadstuffs; (5) canned goods. Students will be permitted to select from a number of recipes in each of the above groups, thus enabling each student to use supplies which are available, or which may be easily secured at home.

Project in clothing. The aim of this project is to teach the pupils by school study and home practice the fundamental principles of sewing and garment making; the choice of materials for various uses; the care and repair of clothing, and the principles concerned with the hygiene of clothing.

Each clothing project student is to do all of the work on the article made, but may receive assistance in interpretation of the directions from the teacher or parent.

The work is so planned that students who have had practice in sewing may do the more advanced work, which will be called Clothing Project, Division II. Beginners should register for Division I work before undertaking that given in Division II.

Age and school requirements. Boys and girls who are above the sixth grade, or who are twelve years of age or older, may undertake any junior home project that has been approved by the superintendent of schools. This includes boys and girls not attending school, and pupils attending high schools that do not maintain vocational departments of agriculture or homemaking.

Parent's consent necessary. The project student should obtain the consent of the parent or guardian before enrolling for the work. The parent's consent carries with it the promise to provide the necessary opportunity and facilities at home and to cooperate in every way possible with the school authorities to make the project work of the greatest educational value to the student.

School work. In addition to the time required for the completion of the home work, at least forty-five minutes per week during the school year is to be devoted to the school and home study of the subject of domestic art, and in the case of the project in foods of domestic science.

Regents' credit. Regents' credit will be granted pupils who complete an approved project and receive a passing grade in the school instruction related to the project. Only one count will be granted to an individual in any one year and a maximum of two counts will be given to an individual for junior project work.

Records. Each student in the food project is to keep on the record sheets furnished, a record of the work done at home, including time required, cost of supplies, and results obtained.

Each student in the clothing project is to buy all materials used in making the article or garment, whenever possible, and to keep an exact account of all expenditures. The actual time spent in making each article is to be recorded on blanks to be provided.

Project notebook. In addition to the labor records, each project student shall keep in notebook form, expressed simply and in her own way by words, drawings, and pictures, what she has studied and accomplished in connection with the project.

A loose-leaf notebook, 8½ by 11 inches, will be the most useful and can be easily constructed. Special suggestions for preparing the notebook may be obtained from the teacher.

Final project report. A final project report will be required of all project students who desire school credit. This report, which will be a summary of the season's work, is to be made on forms supplied by the State Department of Education and distributed by the District Superintendent of Schools.

Special information. For special information concerning this project, inquire of your teacher, write or phone to your District Superintendent of Schools, or write to the Rural Education Department, Junior Extension Work, College of Agriculture, Ithaca, New York.

CONVENIENT KITCHENS

PROFESSOR HELEN BINKERD YOUNG

When one considers how indispensable the kitchen is, it seems as though system and organization in arranging and equipping the kitchen were supremely necessary, especially since arrangement and equipment are permanent features. Yet the vast majority of kitchens have not been standardized, and if you were to ask thirty women concerning arrangement, you would find that they do not agree on the high spots, let alone the details.

In defining the function of the kitchen, we must not only have a thought for what it includes but for what it excludes as well. Properly speaking, the kitchen is a scrupulously clean room intended for operations connected with food materials. It should not have to provide space for eating, for washing and ironing clothes, for lavatory purposes, clothespress, or passageway. It seems unwise to increase its size so as to include laundry work, since laundry work is done but once a week and would better have a space by itself. If the family washing is done in the kitchen, however, it should be so arranged that all food work is grouped at one end and laundry work and passage at the other, with the stove as a common piece of equipment between. A thin partition between makes a more economical arrangement than does the single large room with the two kinds of work crossing one another.

In general, approximately square shapes for kitchens and pantries are more convenient than are long, narrow ones. Eight feet should be the minimum width of the kitchen, and in most cases it should be large enough to accommodate two workers in an emergency. After size, the next step to be considered is the placing of openings. Some kitchens seem to have a regular epidemic of doors. Five or six doors may be needed in connection with kitchen work, yet these need not be located in the kitchen proper. Two or three are the most that are needed in a well-planned kitchen and these should, as nearly as possible, be arranged at one side, corner, or end, thus leaving a continuous wall space in an alcove form for the arrangement of equipment.

The equipment should line the walls, leaving a free central space for working. The essential pieces of furniture are the table, the stove, and the sink, which represent the three essential operations carried on, and we may define them as the food center, the heat center, and the water center. The food center should, if possible, be located on an outer wall, with the sink and range centers on inside walls and with light coming in from the side. If possible, the food and water centers should be combined into one arrangement, such as the table top, the cabinet shelf, and the drain board, thus forming a continuous shelf on the same level, which, for the sake of comfort, should be from 32 to 35 inches from the floor, and for most workers 34 inches is satisfactory.

The pantry may be defined as an enlarged closet through which one passes or into which one steps instead of merely reaching. There are two general types of pantries, the food pantry and the pass pantry. The food pantry is intended primarily for the storage of food supplies that must be kept cooler than the temperature of the kitchen. The pass pantry is used for the storing of china and the serving of meals; but, more than that, it shuts off the noise and the odors of the kitchen from the rest of the house.

The arrangement of shelving is perhaps the most important feature in the planning of storage space. For the best results, shelves should be designed only wide enough to hold comfortably one row of supplies, whatever kind are considered. Narrow shelves placed close together are more accessible and easier to keep neat than wide shelves spaced far apart. Deep shelves with two or three rows of materials are obviously difficult to make of practical use, since the articles hidden have to be groped for. Personal experience has taught me that it is a very peculiar member of pantry society that needs more than twelve inches of shelf space, and I have governed the width of my pantry shelves accordingly.

In the matter of floor coverings, I may say that at present no perfect floor covering that is cheap enough for use in private homes has been invented. The materials most available are wood and linoleum. Linoleum has the advantage of being practically crackless, quiet and easy to walk on, and adheres tightly to the floor. Next to linoleum, a maple or a beech floor of narrow boards is the most desirable. Although both are light in color, they are hard and can be kept clean, while pine and oak are too open-grained to be entirely satisfactory. A maple floor should be finished by saturating it with hot linseed oil for a number of hours and then should be wiped up. This makes the floor proof against grease.

The fewer the grooves and moldings there are in the kitchen, the better; wainscoting, for example, is worthy of condemnation. In the majority of cases light walls prove most satisfactory.*

(Slides were shown to illustrate the points presented in the lecture.)

STANDARDS IN WOMEN'S CLOTHING

MISS BERTHA TITSWORTH

The homemaker should choose her house dresses with care and with consideration for several requirements. The house dress should be of lightweight material and easily laundered. It should be simply made and should have short sleeves. Lastly, the house dress must be becoming.

It should be remembered that one's costume in the home is really a part of one that gives a background as the outside world sees the homemaker. It is really an expression of her tastes and instincts, and her care in choosing and wearing the house dress must needs have an influence in raising the ideals and standards of the community in which she lives.* The mother of the family should further remember that the standards of her children are formed largely from her own example. A child's love of color should be fostered and developed in so far as possible by interest in the mother's gowns. For example, it is desirable to give the child a choice between two equally good colors when the mother's housedresses or other dresses are bought, and to follow the choice that is indicated.

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* For more detailed information on kitchen planning, see Cornell Reading Course for the Farm Home No. 108, "Planning the Home Kitchen," by Helen Binkerd Young.

A serious problem confronts the mothers of high school girls today in training them to form standards for themselves in the matter of suitability of school dress. They see other girls in inappropriate and elaborate costumes — many times half-worn gowns that have been suitable only for social events. Our greatest hope for changing this condition is in giving our girls a viewpoint regarding the fitness of things and in creating in them an interest and admiration for common sense and simple clothing for ordinary occasions.

A HOME SURVEY — WHY?

E. H. FORRISTALL

The farm home survey, which was conducted in the town of Lapeer, Cortland County, in 1915, was undertaken with three ends in view:

First, to determine the kinds and amount of work performed by the homemakers.

Secondly, to determine the kinds and amount of equipment used by the average farm home.

Thirdly, to point out the relative importance that household equipment has in determining the length of a day's work.

We realize that this survey is not so complete as it should be, perhaps, but we feel that it affords data and thought for individual study. The forty homes surveyed, of which a table of results follows, were not selected because they afforded any particular advantage, but because the women whose homes were surveyed were willing to have the work done. So far as it was possible, successive homes on different roads were surveyed, with no reference to size of family or income.

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* Young women from the Department of Home Economies enabled Miss Titsworth to illustrate her talk, appearing first in appropriate house dress and later in appropriate costume. The details of the uniform that was recommended for the house were discussed at considerable length, the discussion including a consideration of materials, designs and colors.

RESULT OF FORTY HOME SURVEYS MADE IN THE TOWN OF LAPEER, CORTLAND COUNTY, 1915

	Home highest in efficiency	Average five homes highest in efficiency	Average forty homes	Average five homes lowest in efficiency	Standard rating
Home:					
Number of adults	3	2.8	2.88	2.8	....
Number of children	1	1.4	.83	.4	....
Amount of floor space cared for	2298 sq. ft.	2179 sq. ft.	1735 sq. ft.	1354 sq. ft.	....
Plan of rooms as regards relation to each	19 %	19.4%	18.05%	17.2%	20%
Efficiency:					
General equipment	16 %	15.6%	14.15%	12.8%	16%
Kitchen equipment	58 %	53 %	45.8 %	41.6%	60%
Laundry equipment	20 %	25 %	18.58%	16.2%	20%
Pantry equipment	22 %	18.6%	18.38%	15.4%	24%
Kitchen:					
Size	10 %	10 %	9.48%	7.0%	10%
Arrangement and plan	20 %	20 %	18.08%	16.0%	20%
Relation to other rooms	9 %	9.6%	9.2 %	8.6%	10%
Ventilation and light	27 %	27.2%	26.48%	22.5%	30%
Finish of walls and floor	10 %	9.6%	8.48%	5.8%	10%
Sanitation and water supply	100 %	86.4%	41.08%	24.0%	100%
Sewage disposal	100 %	88.2%	76.8 %	68.0%	100%
Total per cent. of efficiency	411 %	361.6%	304.7 %	258.8%	420%
Rating in household efficiency	134.9%	118.7%	100 %	84.9%	....
Labor:					
Hours per year sewing	....	220	98.5	62	
Hours per year mending	104	98.5	135.45	155.8	....
Hours per year preparing meals, baking and washing dishes	1460	1599	1475.31	1487.2	....
Hours per year care of house	730	655.4	852.41	871	....
Hours per year laundry work	260	260	264.9	322.4	....
Hours per year care of poultry	30	130.8	212.23	267.4	....
Hours per year barn chores	....	36.2	241.4	291.8	....
Hours per year other farm work	....	23.4	43.43	61.4	....
Hours per year all other outside work	....	187.2	138.78	39.0	....
Hours per year canning fruits, vegetables, meats, preserves, pickles	35	55.1	49.25	63.2	....
Hours per year care of meat products after butchering	10	11	14.63	24.0	....
Total hours labor	....	3339	3517.88	3688	....
Hours per day actual housework	7.6	8.3	8.13	8.3	....
Hours per day all work	8	9.2	9.63	10.1	....
Hours leisure per day	2.5	1.5	1.86	1.9	....
Products canned:					
Jars of fruit	60	88.5	84.95	69	....
Jars of vegetables	15	37.6	19.8	21.2	....
Jars of meats	63	45	12.5	10	....
Cups of jelly and preserves	25	34	31.53	23.2	....
Homes in which eggs are preserved for winter use	....	....	3	1	....
Homes in which eggs are not preserved for winter use	....	5	37	4	....

Housewives adopting new method in all canning, wholly or in part, 95 per cent.
Of the five housewives highest in efficiency, three used new methods altogether.
Of the five housewives lowest in efficiency, three used old methods more than the new.

For several years farm surveys have been made, and a great deal of extension work in agriculture has been based upon facts brought out in such surveys. Now we are having the use of a portion of the Smith-Lever funds for the advancement of the homes, and it is only right and just that some definite work be done to determine how these funds should be spent to the best advantage.

In a given community the farmers might have the opinion that a certain line of work was necessary in their town. For example, they might choose to develop a certain industry, such as dairying, while possibly they are carrying on as much dairying as the size of their business would warrant. A survey would indicate that rather than increase dairying, there should be a larger acreage of cash crops, thus diversifying their farming in order to utilize the labor of that farm to a better advantage. In the case of the homemaker steps must be saved, and equipment may oftentimes well be added at slight expense, such equipment affording a saving of labor and time each day for 365 days in the year. Yet many times the homemaker feels that she is economizing by putting off from year to year the installation of a water system and bathroom in her home, in order that her husband may purchase more cows and perhaps a corn harvester, an implement used on the average farm only two or three days in the year at the most and one that lies idle for the balance of the year.

For the same money expended in the corn harvester a good water system could be installed in the home. We might go on and enumerate several similar examples that, in a measure, are false economy. We would not discourage the purchase of labor-saving farm implements, but more consideration should be given the housewife and the very necessary device required to conserve her energies and save much unnecessary labor.

The table referred to gives in the middle column the average of forty homes and in the last column the standard of rating. Compare the average of forty homes with the average of the five highest in efficiency in the left-hand column and the five lowest in efficiency in the right-hand column with relation to equipment. You will note that the labor in hours is correspondingly higher with the low rating of equipment and correspondingly lower with the high rating of equipment. You will also note the column at the extreme left in which we place the figures of each survey to be returned, thus allowing the individual to compare her rating with that of the average forty homes or with that of the five highest or the five lowest in efficiency. In the present instance, the record of the home highest in efficiency is given.

In our experience we have observed that women will take up new methods of work very readily. This fact is brought out in our own township where a canning club had been organized about six months previous to taking these surveys, and nearly every home adopted the new methods wholly or in part. Those still clinging to the old methods of canning are lowest in amount of equipment and consequently require a much longer time each day to accomplish their day's work. Those who have adopted the easier and shorter methods of doing their work have time to provide more liberally for their family, not only in cooking and baking, but in canning the surplus of meat, vegetables, and fruit on the farm; and they have much more time to devote to the interests and education of their children.

The interests of the home are being recognized as so important that much time and thought are now devoted to them. Educated women are being sent into the field to work with homemakers in groups, and with individuals in their homes. One of the most thorough ways of finding out the needs of a community is by making a survey of the homes in that community, and the facts disclosed by this work will suggest the needs of the community and inspire the people to work that should be done.

PROGRESS IN WORK FOR WOMEN IN ERIE COUNTY

MISS SARA PETTIT

The Department of Home Economics of the Erie County Farm Bureau was organized two years ago on August 8. During this time much profitable work has been done among the women of Erie County. Like the men of the county, the women may be active members of the farm bureau; in addition to active membership there is an associate membership among the women. Active members pay $1 in dues, 25 cents of which is returned to the club for local uses; the remainder comes to the farm bureau for subscription to the "Farm Bureau News" and expenses of this department. The active members have the same privileges as the men of the association. The associate membership dues are 25 cents, a fee that entitles the women to all the privileges of the local clubs. Although there may be members distributed in sections of the county where there are no nearby clubs, the general plan of organization has been to form the various groups of women into organizations for the study of home problems. There are at present 30 such organizations. Four of the organizations formed the first year have never been active, three of these being located in towns that were already overorganized.

Each of the organizations plans its own activities as best suits the community in which it is located. Most of them meet once a month. Three meet every two weeks and one meets weekly. A number of them hold no summer meetings, as they are located in the market garden districts, and their members feel that they have not an afternoon to spare from garden work. Their programs deal largely with home problems. In some cases selections from American literature are studied, and in almost all programs music is included. In place of a literary program one woman who has special ability may sometimes give a demonstration to the others present. During the past year demonstrations have been given by local women in soap-making, candy-making, crocheting, shortcake making, doing-up of conserves, and packing lunch boxes. An hour is usually spent in social intercourse and refreshments are sometimes served.

At a recent meeting at Morton's Corners, when a new club was organized, the remark most often heard was, "We don't know our neighbors"; then and there they determined to learn how really likable the members of their community were.

In addition to program work different clubs carry on community projects. These vary with the location and the needs of the communities. Considerable Red Cross work has been done during the last summer, the club at Springville having packed seventy bags of Red Cross supplies.

The Derby Club has got together sick-room accessories for the use of their local doctor in homes that have no such conveniences. Several clubs have their sick committees, which visit the sick in their locality, send flowers and invalid foods, thus bringing comfort to those who are ill. There are also several clubs that send out baskets containing Thanksgiving and Christmas dinners to those who would otherwise have none. Two clubs are planning community Christmas trees.

The club at Sardinia rents and keeps up a hall for community purposes. This was done after its members had been refused the use of church parlors for their club meetings.

The club at Angola is reaching its community through its young people. Meetings are held in the high school building and are thrown open to the girls of the high school. When subjects of interest to both girls and boys are taken up, the boys are also invited. A demonstration on crocheting was attended by twenty-three girls and seven teachers. A report has not yet been received as to the number attending a lecture on first aid to the injured, which was given by a local physician.

Clarence Center raised money for lights for their village. Since the money was raised there is a possibility of electricity being brought to this community; therefore, lights will not be installed until the decision is made as to the kind of lighting that they will have.

One of the most telling projects has been the organization of a cooperative egg-marketing association in connection with the home economics club of Collins Center. This started with a membership of eight women who agreed to stand by the project for one year. The number has increased to twenty-six who are shipping eggs through the local manager. A word of explanation may be pertinent. The women bring their eggs to a central place where their manager receives them, and candles and grades them as to color and size. She attends to all packing, shipping, and financing, and receives for this work 1½ cents for each dozen eggs candled. At the present time these women are receiving from 6 to 10 cents more a dozen than their local dealer pays. The members feel that not only are they receiving more for their eggs, but because of this organization the local dealers have maintained a higher price, a raise of 4 cents a dozen being made one day when a meeting was called to give a report on prices. Requests have come from five other communities to organize such associations. The Collins Center association was organized in cooperation with the poultry department at Cornell.

A five-day school was held at Derby, in connection with a Cornell extension school. Miss Titsworth of Cornell took charge of the meetings for two days. Miss Titsworth also gave a very successful two-day sewing demonstration in Clarence Center.

Throughout the entire year Cornell has stood back of this county with suggestions for subject matter, with demonstrations, and financial assistance, having furnished the funds which made possible an assistant.

In May, a general meeting of all club members was held at the Hotel Statler. Professor Martha Van Rensselaer and Miss Florence E. Ward spoke to the women, giving them a message that inspired them to greater enthusiasm in this type of work. Miss Burton Fletcher of Buffalo entertained them with a reading and Miss Mary Tenant with vocal selections.

On September 12, there was a meeting of all club presidents. The general discussions at this meeting were along the lines of better organization within the club, plans for a membership campaign, and the types of work they would like to have the home economics department of the farm bureau take up with their clubs for the coming winter. It was decided that the women are better prepared to meet the cooking problem than they are the other problems within the household, and this department was asked to emphasize in their demonstrations for the coming year better health, better household sanitation, and better household equipment.

On October 13, an invitation was issued to the women of the county to meet in Buffalo and make a trip through several of the food plants in the city. It was decided that they would visit the Dold Packing House, Ward and Ward's Bakery, and the George Urban Milling Company's flour mill. Although the day was very rainy, 286 women gathered for this expedition.

In order to make the work of the clubs more effective, we have tried during this past fall to meet for a short visit with each president to discuss her local conditions and her own problems, and to offer suggestions to solve her difficulties. We have also met with the program committees of the various clubs to help plan their programs for the coming year and to offer suggestions as to sources of materials for their programs. This seems to be meeting with an appreciative response from the various program committees. The total membership in the clubs at present is 703.

Although most of the time of this department is spent in promoting the success of the various clubs, yet some time is spent in other activities, the most important of which are the field meetings, farmers' institutes, and farm bureau demonstration institutes. When the men in a locality are called together for a field demonstration on poultry, potatoes, dairy, cauliflower, cabbage, or on any other subject where the work can be correlated, this department gives a demonstration on the cooking qualities of such food, supplemented with a talk on its value in the diet of the family. We have reached a large number of women in this way with whom we otherwise would not have come in contact. The most successful field meeting that this department has participated in was that of building a septic tank on a farm near Alden. Professor Riley of Cornell took charge of the meeting. There were 84 in attendance, mostly men, some of whom came 30 miles to see the septic tank made.

During the winter, one-day demonstration institutes are held in various communities. The afternoon is devoted to a special session for women, and a part of the evening program is devoted to home topics of special interest to both men and women. At the farmers' institute conference this department is at the service of the women in charge of the farmers' institute session.

Calls occasionally come to this office to meet with granges or other organizations, and in so far as it is possible this is done.

Some work has been done with rural schools. Through the Angola Club, a demonstration was held showing the possibilities of the girls' preparing a hot luncheon. One school in this community has already instituted the hot meal at noon for its students. One meeting was held with about 300 rural school teachers, taking up the problem of teaching home economics in rural schools.

Many requests come for individual help, and whenever possible these are taken care of by letter. Several visits have been made, however, to individual homes to give counsel with regard to changing kitchens, installing septic tanks, or making other household improvements. Advice is often asked on the clothing for all members of the family from the infant to the adult.

During the Hamburg Fair a booth was furnished exhibiting ten-cent portions of the common foods with cards explaining their relative food values. A bread contest was conducted for the girls of the county, and several loaves of bread were exhibited. Charts dealing with nutrition were hung where the passers-by could easily read them.

The canned and baked goods exhibits at the Erie County Fair were judged by this department. The manager was called to judge at the Flower Carnival at Clarence and the annual community fair held at the Planters' Club at Derby.

Three trips were made out of the county in the spring, two to present the work of this department at the meeting of extension workers of the Middle Western States in Chicago and at the Household Arts Conference at the Teachers' College Alumni meeting. The third was to Washington to attend a conference on boys' and girls' club work.

From January 1 to November 1, there have been held the following:

	Number	Attendance	Average Attendance
Club demonstration meetings	98	3,050	31
Club lecture meetings	17	494	29
General lecture meetings	23	948	41
General demonstration meetings	7	307	44
Conferences with presidents	23	....	....
Program committees	15	45	3
Lectures outside of county	4	263	66

DISCUSSION OF QUESTIONS

Q. 12. Is it necessary to buy medicines in order to obtain iron, phosphorus, or lime?

In the case of the normally healthy person, iron is not only not unnecessary, but inadvisable. The most available food sources of iron are meats, legumes, eggs, whole wheat, oatmeal, vegetables, and fruits; of phosphorus — legumes, whole wheat, egg, yolk, beef, and milk; of lime — milk, legumes, cabbage, and celery. In pathological conditions, the physician should be consulted before iron is taken in medicinal form. In reality, the iron in medicinal form is not utilized, but its action is to make available the iron contained in food.

Far less medicine would have to be consumed if spring greens were freely utilized. They are at their best while in the tender stage. Not only dandelions, but dock, milkweed, and cowslip are preferable to sulphur and molasses in early spring. We are also justified in urging the housewife to put down a plentiful supply of winter eggs. If eggs save butter, there is little economy in making an eggless cake.

Q. 16. What are the best sources of sugar in the diet?

The best sources of sugar are in fruits and other foods in which it naturally occurs, rather than in the sugar or candy form.

Q. 19. Does the care of the feet affect the general health?

Poise is essential to good work, and poise depends on the comfort of the feet as much as on any other part of the body. Poor shoeing throws the spinal column out of poise, and causes nerve strain. Great care is taken in shoeing the young colt, and it is equally important in the case of children. The feet of the barefoot boy are likely to develop naturally and sturdily. The housewife should never use half-worn dress shoes as a part of her work costume.

Q. 32. Can utensils be made more durable by preparatory treatment before they are used?

If new baking-tins are thoroughly rubbed with unsalted fat and set in the oven until the fat has become baked in, they are less susceptible to rust and will brown bread and cake better. Enamel ware may be toughened by filling the utensil with cold water and setting it where the water will be gradually heated to the boiling point. The water should boil for from five to ten minutes, and be allowed gradually to cool again in the utensil.

Bristle brushes should be soaked in cold water before being used for the first time.

Corn brooms should be soaked in hot suds, well rinsed, and dried in a current of air, either by hanging them up or by laying them across two clotheslines. Brooms treated after this manner once in two weeks will greatly outlast those that are not kept pliable.

Q. 36. How does good ventilation lessen work?

Metals are tarnished by an escape of sulphur from fires or lights; and by the film of dust, moisture, and grease present in any poorly ventilated kitchen. This same film is also deposited on windows and walls, making the housecleaning problem much more serious than in a well-ventilated room. An extreme instance of this cleaning problem is found in trying to wash windows in a room in which men have been smoking without letting in any fresh air.

Poor ventilation lowers vitality, therefore a lack of fresh air in the kitchen not only increases work, but lessens the worker's ability to do it.

SUGGESTIONS

In so far as possible, it is desirable that women correspondents be chosen by the women and not by the men.

Demonstrations by our institute workers on some subject in which they are especially expert would be worth while at the next Normal Institute Conference. For example, Miss Jones is prepared to give us a demonstration on carpentry, Dr. Heaton on home nursing or the practical arrangement of a schoolhouse for best health conditions.

It is desirable, as a part of this winter's work, to try to arrange for demonstration work by some of the local women at next winter's institutes, the demonstrations to be given at the separate women's sessions, and the demonstrator to be assisted by the institute worker in charge of the session. A list of places where this arrangement seems feasible should be submitted to the Director at the end of the present institute season.

It is important to follow up the work, begun at the Farm Girls' Camp at the State Fair, of interesting the girls in the work of the institutes. A list of the girls, with their addresses, has been given to each woman on the institute force.

Miss Jones moved, and the motion was carried, that we recommend the following questions to be included in the Farm Bureau Survey questionnaire:

1. What papers are taken in the farm home?
2. What literature is available in the farm home?

Mrs. Jones moved, and the motion was carried, that we recommend that a woman be named as a member of the Farm Bureau Council.

Mrs. Phelps was appointed to present the recommendations to the Farm Bureau Council.

Guaranteed and standardized underwear and clothing may be obtained through the Consumers' League Shopping Service. This may be recommended to individuals and dealers. Address Miss Emma Beard, Fayetteville, New York, for information.

WOMEN IN ATTENDANCE AT THE NORMAL INSTITUTE CONFERENCE

Miriam Birdseye, Ithaca.
Mrs. F. E. Bonsteel, Ashville, R. D. 63.
Lucile Brewer, Ithaca.
Helen Cannon, Ithaca.
Florence H. Freer, Cooperstown.
Viola Morris Godfrey, Watertown.
Mrs. Katherine M. Hamilton, Delhi.
Mrs. Ida S. Harrington, Albany.
Dr. Lucia E. Heaton, Canton.
Mrs. Della A. Jones, Worcester.
Jennie C. Jones, Paris.
Mrs. W. L. Markham, Hamburg.
Mrs. Mary T. Monroe, Dryden.
Edith J. Munsell, Albany.
Claribel Nye, Ithaca.
Sarah Pettit, Buffalo.
Mrs. Orra Parker Phelps, Canton.
Georgia E. Robertson, Watertown.
Mrs. Charles H. Royce, Ithaca.
Professor Flora Rose, Ithaca.
Mrs. J. W. Stephen, Syracuse.
Mrs. Charles A. Taylor, Herkimer.
Bertha E. Titsworth, Ithaca.
Helen Van Keuren, Buffalo.
Professor Martha Van Rensselaer, Ithaca.
Mae L. Wells, Cortland.
Angeline Wood, Alfred.
Mrs. Helen Binkerd Young, Ithaca.

BIBLIOGRAPHY OF RURAL SOCIOLOGY

This bibliography was prepared in the Educational Extension Division of the University of the State of New York, State Department of Education, Albany, New York, in March, 1916.

Amer. Acad. of political and social science. Country life. 1912. Amer. Acad., $1.50.

Social and industrial aspects of the rural problem discussed by twenty-eight specialists.

Anderson, F. I. Farmer of tomorrow. 1913. Macmillan, $1.50.

A refreshing book on the farm possibilities of the United States.

Anderson, W. L. Country town. 1906. Baker, $1.

"An optimistic social and economic study of rural degeneration in the United States, its causes and remedies." *Best Books* 1906.

Ashenhurst, J. O. Day of the country church. 1910. Funk, $1.

A fairly concise and clear outline of methods for the country church emphasizing sociological lines.

Bailey, L. H. Country life movement in the U. S. 1911. Macmillan, $1.25 n (Rural outlook set).

A valuable study of the rural problem.

Bailey, L. H. Holy earth. 1915. Scribner, $1 n.

The author presents here his personal views of man's relation to the soil, both physical and spiritual. Treats a large variety of topics and aims at an ideal future state of society.

Bailey, L. H. Nature study idea. 1903. New ed. 1909. Macmillan, $1.25 n (Rural outlook set).

Sub-title: An interpretation of the new school-movement to put the young into relation and sympathy with nature.

Bailey, L. H. Outlook to nature. Macmillan, $1.25 n (Rural outlook set).

Four lectures, including country and city, and school of the future.

Bailey, L. H. State and the farmer. 1908. Macmillan, $1.25 (Rural outlook set).

Discusses political and economic condition of the farmer, what the government is doing for him and what should be attempted in the future.

Bailey, L. H. York State rural problems. 1913. 2v. Lyon, $1 each.

Addresses and papers delivered before different organizations or contributed to rural journals.

Beard, A. F. Story of John Frederick Oberlin. 1909. Pilgrim Press, $1.25.

The best biography in English of Oberlin.

Bennett, E. N. Problems of village life. 1914. Holt, 50 cents n (Home university lib. of modern knowledge).

Betts, G. H. New ideas in rural schools. 1913. Houghton, 60 cents n (Riverside educational monographs).

Discusses the social organization and relationships of the rural school, the curriculum and the quality of teaching. It is a constructive criticism of the whole situation.

Bowsfield, C. C. Wealth from the soil. 1914. Forbes, $1 n.

Aims to show how city families or amateurs can best proceed to acquire land and engage successfully in agriculture. Touches on many aspects of farm work and country life.

Bricker, G. A. Solving the country church problem. 1913. Meth. Bk., $1.25 n.

" Product of the experience of 15 rural leaders who believe that the country church will recover its former influence only when it adopts a community ideal as well as a church ideal." *Bost. Trans.*

Bullock, E. D., comp. Agricultural credit. 1915. W. H. Wilson, $1 n.

Selected readings intended for the student or general reader who seeks accurate information and well selected readings on this new subject.

Butterfield, K. L. Country church and the rural problem. 1911. Univ. of Chic., $1 n.

"States the condition of agriculture and what constitutes the rural problem and outlines the task of the church."

Butterfield, K. L. Chapters in rural progress. 1908 Univ. of Chic., $1.25 n.

A comprehensive outlook on the social development of rural life. One of the best books on the subject.

Carleton, W. (pseud.) New lives for old. 1913. Small, $1.20 n.

An interesting narrative of how scientific farming was introduced into a conservative New England district, by the author of "One way out".

Carver, T. N. Selected readings in rural economics. 1916. Ginn, $2.80 n.

A valuable selection, covering agricultural history; land tenure; agricultural labor; farmers' business; agrarian movements in the U. S.; rural organization and marketing; agricultural policy.

Carver, T. N. Principles of rural economics. 1911. Ginn, $1.30 n.

"Best book yet published on agriculture and the rural problem in their relation to national economy."

Coulter, J. L. Cooperation among farmers; the keystone of rural prosperity. 1911. Sturgis, 75 cents.

Of value both to farmers and to students of rural life.

Country life commission. Report. 1911. Sturgis, 75 cents n.

Full report of the commission appointed by President Roosevelt.

Cromwell, A. D. Agriculture and life, ed. by Kary C. Davis. 1915. Lippincott, $1.50 n.

Designed for teachers who conduct classes in agriculture in rural schools, but contains much material relating to problems of country life that will be of interest to a much wider circle.

Crow, M. F. American country girl. 1915. Stokes, $1.50 n.

The author has studied rural conditions in all parts of the country and writes of those phases of farm life that particularly affect the girl.

Cubberley, E. P. Improvement of rural schools. 1912. Houghton, 35 cents.

(Riverside educational monographs.)

Cubberley, E. P. Rural life and education. 1914. Houghton, $1.50 n (Riverside textbooks in ed.).

"A valuable addition to the literature of rural life and rural school conditions." H. W. Foght.

Curtis, H. S. Play and recreation for the open country. 1915. Ginn, $1.25.

Dahlinger, C. W. New agrarianism; a survey of the prevalent spirit of social unrest, and a consideration of the consequent campaign for the adjustment of agriculture with industry and commerce. 1913. Putnam, $1 n.

Earp, E. L. Rural church movement. 1914. M. E. Bk., 75 cents n.

The work is both historical and sociological, progressive and broad in treatment and characterized by a spirit of sanity.

Eggleston, J. D., & Bruère, R. W. Work of the rural school. 1913. Harper, $1.

"An interpretation of the new movement in rural education that advances the slogan 'We must hitch education up with life'."

Fairchild, G. T. Rural wealth and welfare; economic principles illustrated and applied in farm life. 1900. Macmillan, $1.25 n. (Rural science ser.).

Pt. 1. Productive industry.
Pt. 2. Distribution of wealth.
Pt. 3. Consumption of wealth.

Fairlie, J. A. Local government in counties, towns and villages. 1906. (Amer. state ser.) Century, $1.25 n.

Careful and comprehensive survey.

Farrington, Frank. Community development; making the small town a better place to live in and a better place in which to do business. 1915. Ronald Press, $1.50.

Provides information that will make easy the formation and operation of commercial clubs and allied organizations. Discusses advantages and business opportunities of the small town, community celebrations, etc.

Farwell, P. T. Village improvement. 1913. Sturgis, $1 n.

"Up-to-date information on the organization, methods and proper activities of village improvement associations."

Fiske, G. W. Challenge of country life; a study of country life opportunity. 1912. Assoc. Press, 75 cents.

"Written by the junior dean of Oberlin theological seminary for the use of college students in Christian associations and as a handbook for the training of leaders in rural Christian work."

Fought, H. W. American rural school. 1910. Macmillan, $1.25 n.

For teachers, superintendents and trustees. Comprehensive treatment of rural school problems.

Gill, C. O., & Pinchot, G. The country church; the decline of its influence and the remedy. 1913. Macmillan, $1.25 n.

Gives the results of a careful investigation of two counties, one in New York and one in Vermont.

A valuable contribution to the rural church problem.

Gillette, J. M. Constructive rural sociology. 1913. Sturgis, $2 n.

A comprehensive review of the subject, summarizing much recent literature, with good bibliographies. A good introduction to the study.

Green, J. B. Law for the American farmer. 1911. Macmillan, $1.50 n. (Rural science ser.).

Very complete exposition of law as it affects the farmer's interests." *A. L. A.* 1911.

Hall, Bolton. A little land and a living. 1908. N. Y. Arcadia Pr., $1.

Discusses the possibilities of agriculture in vacant lots and small areas of land.

Hall, Bolton. Three acres and liberty. 1907. Macmillan, $1.75.

A handbook of tested theory regarding land and its possibilities.

Hart, Jos. K. ed. Educational resources of village and rural communities. 1913. Macmillan, $1 n.

Discussion of the problems of the betterment of rural life. Papers by experts in various economic and social fields.

Hays, W. M. Education for country life. 1909. Supt. Docs., 5 cents (Experiment stations office, cir. 84).

Argues for consolidation of rural schools, agricultural high schools, etc.

Herrick, M. T., & Ingalls, R. Rural credits; land and cooperative. 1914. Appleton, $2 n.

Discusses the relative merits of methods; explains all forms of cooperative savings and loan associations and the wonderful European landschafts, or associations of borrowers. Mr. Herrick is U. S. Ambassador to France.

Hutchinson, *Mrs.* F. K. Our country life. 1912. McClurg, $2 n.

A simple account of the everyday life of two people who chose to leave the city to build up slowly an all-year-round home in the country.

Israel, H. *ed.* Country church and community cooperation. 1913. N. Y. Y. M. C. A., $1.

Papers by various writers.

Kennedy, J. Rural life and the rural school. 1915. Am. Bk., 80 cents n.

Points out the factors that have kept country life from being the best and most complete life possible. He is concerned chiefly with the needed improvement of rural schools.

Kern, O. J. Among country schools. 1906. Ginn, $1.25.
"Treats of every important phase of rural school activity."

Lighton, W. R. Happy Hollow farm. 1915. Doran, $1.25 n.
A back-to-the-land story with the ring of truth. How a newspaper man and his wife took a run-down farm and in six years made it profitable and incidentally improved the tone of the whole county.

McKeever, W. A. Farm boys and girls. 1912. Macmillan, 50 cents (Rural science series).
"Comprehensive survey of the position, limitation and needs of the boy and girl in the life of the average rural community." *A. L. A. Bkl.* 1912.

Morman, J. B. The principles of rural credits; as applied in Europe and as suggested for America; with an introduction by J. Lee Coulter. 1915. Macmillan, $1.25 n (Rural science ser.).
Among matters taken up are amortization of farm mortgages, mortgage loans, the issue of farm mortgage bonds, the Torrens system, the building and loan association, the part that the national government may play and the position of tenant farmers.

Largely drawn from the report of the commission that went abroad to study the question of rural credits in 1913.

National Society for the study of education. Rural school as a community center. 1911. Univ. of Chic., 75 cents n (Tenth Yearbook pt. 2).
Eight papers, including accounts of methods already in use.

Plunkett, H. C. Rural life problem in the U. S. 1911. Macmillan, $1.25 n.
Review of American conditions by the head of the rural movement in Ireland.

Poe, C. How farmers cooperate and double profits. 1915. Judd, $1.50 n.
An appeal to the farmer in direct readable chapters, to get control of his own business, and to lead in the work of cooperation.

Pratt, E. A. Organization of agriculture. 1904. Dutton, $2 n.
General survey of the movement in various countries, especially with the issues between agriculture and transportation.

Quick, Herbert. Brown mouse. 1915. Bobbs, $1.25.
Story written to make clear the benefit which should arise from making the country school a matter of practical value to the community.

Roads, C. Rural Christendom; or the problem of Christianizing country communities. 1909. Amer. S. S. Union, 90 cents n.
"A helpful and suggestive book."

Rockwell, F. F. Key to the land. 1915. Harper, $1.
Book for the city man who thinks of turning to the farm as a means of livelihood. Is written in story form but describes an actual experiment tried out on a run-down farm in the eastern part of the country.

Saint Maur, Kate V. Making home profitable. 1912. Sturgis, $1.
Tells instructively how one woman built up a profitable home in the country. Chapters devoted to poultry raising, vegetable gardening and what to grow, flowers and fruit, and the raising of bees and pigs.

Stern, R. B. Neighborhood entertainments. 1910. Sturgis, 75 cents n.
Practical suggestions for social life in the country and small town.

Streeter, J. W. The fat of the land, the story of an American farm. 1904. Macmillan, $1.50.
Shows what can be accomplished through the application of business methods to farming.

Strout, J. W. Rural problem and the country minister. 17 p. Am. Unit. Ass. (Soc. service Bul. 26 Repr. fr. Atl. Mo.).
A very good statement of the problem of the country church.

Taylor, H. C. Introduction to the study of agricultural economics. 1905. Macmillan, $1.25 n (Citizens library of economics, politics and sociology).
Discussion of economics as applied exclusively to agriculture.

Waugh, F. A. Rural improvement. 1914. Judd, $1.25 n.

Principles of civic art applied to rural conditions, including village improvement and the betterment of the open country.

Weld, L. D. H. Marketing of farm products. 1916. Macmillan, $1.50 n.

" Considered by good authority the best book on the subject. A simple exposition of the whole field, treated untechnically by an expert." Wisc. lib. Bul.

Weld, L. D. H. *ed.* Studies in the marketing of farm products. (Studies in social sciences) 1916. Univ. of Minn., 50 cents. A valuable series of papers by different authors.

Wiley, Harvey Washington. Lure of the land; farming after fifty. 1915. Century, $1.40 n.

" Sets forth for the average man of average means, who wishes to indulge the natural desire for country life, the dangers and difficulties as well as the advantages and successes of making his home on the farm." Good advice from one who is qualified to speak.

Wilson, W. H. Church of the open country.

A study of the church for the working farmer. 1911. 50 cents. Presbyterian Bd. Home Missions. (Forward Mission study ser.).

Wilson, W. H. Evolution of the country community: a study in religious sociology. 1912. Pil. Pr., $1.25 n.

" Most complete study of country community in which church is center of attention." N. Y. Sch. Phil.

REGULAR INSTITUTE WORK

The extent, location, and distribution of the work is shown in the accompanying tables. Those familiar with the state will be quick to note that most of the institutes were held in small places, not infrequently in grange halls in the open country. One hundred and forty-eight meetings were from two to ten miles distant from a railroad, and forty were held in new places.

Special attention is called to the institute at Curriers in Wyoming County, which, it will be noted, occupied three days. This extra time was made possible by a contribution of forty dollars on the part of the people of Curriers. The usual force of two men and a woman was in attendance. The institute commenced on the afternoon of the first day with lectures outlining the work. During the mornings the men visited the farms and dairies, while the lady visited the homes. In the afternoons the men gathered in the hall, and the observations of the morning were discussed; addresses and discussions followed, dairying and kindred topics being most prominent. The women had similar meetings. Two evening sessions were held, where topics of general interest along broad lines were discussed. This was pronounced by both workers and people one of the most satisfactory meetings in which they had ever participated.

WOMEN'S WORK IN THE INSTITUTE

The separate women's sessions have become an established part of every institute. With the question papers to start discussion, the sessions no longer consist of set talks, but take the form of roundtables, with the institute worker as leader.

In many places, notably in Erie County, exhibitions of labor-saving tools were held, and the method of using them was demonstrated by local women. The appointment of women correspondents, to be especially responsible for women's sessions and to supplement the work of the local correspondents, has greatly increased the efficiency of the work. Many of the woman correspondents attend the Director's conferences, thereby securing for their communities instruction in the particular phase of home economics best adapted to their interests. The women correspondents have also cooperated with the women institute workers assigned to them, by writing them of local conditions and needs.

There have been many requests for special lines of work. A few years ago the Director's question: "What do you want the woman speaker to take up?" usually called out the reply, "Oh, just anything — just home topics. During the past year, however, specific calls have come for work in home nursing, care of children, food preparation, basketry, and the choice of utensils, of clothing, of books, and of music. As suggested by the last two topics mentioned, discussions have not stopped with the manual end of housekeeping, but have included its underlying purpose of home-making, thus leading up to the topic embodied in all our evening sessions at the present time "Better homes and better citizens."

FARM GIRLS' CAMP

From September 8 to 16, 1916, the first Farm Girls' Camp was held at the State Fair Grounds, conducted on similar lines to the Farm Boys' Camp. Forty girls were in attendance. The Institute force was represented by Director Van Alstyne as one of the speakers to address the girls; by Mrs. Phelps as one of the six instructors; and by Mrs. Harrington in charge. Talks and demonstrations were given in the Camp lecture tent each morning from 9 to 12. In the afternoons the girls, in groups of ten, were taken to see the exhibits of the Fair or points of interest in the city. The Camp schedule included physical drills, first aid work, chorus singing, and games.

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE

REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
ALBANY:		1916	15	963	64
Becker's Corners	Bronk Vandersee, Selkirk	Dec. 11	3	109	36
Coeymans Hollow	Rev. W. E. Lang	Dec. 12	3	205	68
Guilderland Center	W. B. Mynderse	Dec. 13	3	134	45
Knox	Stanley Williams	Dec. 14	3	159	53
Preston Hollow	Geo. F. White	Dec. 5	3	356	119
ALLEGANY:		1917	23	1 657	72
Angelica	Walter D. Lytle	Jan. 24	3	131	44
Canaseraga	Frank W. Coombs	Jan. 25	2	103	52
Caneadea	Geo. A. Clark	Feb. 1	3	258	86
Richburg	Walter G. Richardson	Jan. 23	3	260	87
Rushford	Eben Haynes	Jan. 31	3	246	82
Short Tract	S. B. Lucky, Fillmore	Feb. 2	3	310	103
Stanards	W. U. Rixford, R. D. 1, Wellsville	Feb. 5	3	200	67
West Clarksville	F. W. Barber, R. D., Bolivar	Jan. 22	3	149	50
BROOME:			16	882	55
Harpursville	C. D. Wasson, R. D., Nineveh	Jan. 19	3	136	45
Maine	O. L. Ketchum	Feb. 6	3	176	59
North Colesville	S. A. Holcomb, R. D., Tunnel	Feb. 7	2	188	94
Upper Lisle	DeWitt K. Beach, Whitney Point	Feb. 9	3	174	58
Vestal	Dwight S. Wakeman, R. D. 1, Vestal	Jan. 27	3	116	39
Windsor	L. B. Edwards, R. D. 6, Susquehanna, Pa	Jan. 20	2	92	46
CATTARAUGUS:			24	1 645	69
Conewango	L. S. Phillips	Jan. 5	3	208	69
Cottage	H. S. Mosher, R. D., South Dayton	Jan. 4	3	317	106
Delevan	E. A. Demmon	Jan. 17	3	148	49
Elkdale	W. E. Niles, R. D. 1, Salamanca	Jan. 13	3	146	49
Farmersville Sta	M. R. Wilder	Jan. 20	3	306	102
Ischua	E. F. Kent, Hinsdale	Jan. 15	3	143	48
Lyndon Center	E. A. Gere, Cuba	Jan. 16	3	207	69
Mansfield	S. G. Skeels, R. D. 1, Little Valley	Jan. 12	3	170	57
CAYUGA:			22	1 250	57
Conquest	E. S. Wilcox, R. D. 39, Port Byron	Feb. 23	2	80	40
Fair Haven	M. C. Turner	Feb. 6	2	66	33
Five Corners	Harry C. Powers, Atwater	Mar. 12	3	205	68
Four Town	Dwight Harris, R. D. 17, Moravia	Mar. 14	3	288	96
Port Byron	Charles R. Hadden	Feb. 5	3	89	30
Powers Corners	George P. Yawger, Union Spgs	Mar. 12	3	121	40
Sennett	S. L. Hopkins	Mar. 15	3	261	87
Sherwood	Jas. A. Gould, Venice Ctr	Mar. 13	3	140	47
CHAUTAUQUA:		1917	35	2 291	65
Arkwright	D. M. Cole, R. D., Fredonia	Jan. 2	3	136	45
Clymer	E. E. Avery	1916 Dec. 20	3	193	64
DeWittville	Mett Flanders	1917 Jan. 8	3	190	63
Ellington	L. G. Brainard	Jan. 6	3	265	88
Findley Lake	Chas. H. Smith, R. D., Sherman	1916 Dec. 19	3	253	84
Forestville	W. L. Tanner	1917 Jan. 3	3	179	60
Frewsburg	Chas. M. Wigren	Jan. 11	3	189	63
Gerry	H. L. Johnson	Jan. 10	3	216	72
Ripley	Andrew J. Cochrane	1916 Dec. 18	3	266	89
Steadman	E. J. Hansen, Ashville	Dec. 22	2	49	25

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)
REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
CHAUTAUQUA—(*Cont'd*).		1917			
Stockton	F. N. Hammond	Jan. 9	3	232	77
Watts Flats	W. G. Smith	1916 Dec. 21	3	123	41
CHEMUNG:		1917	15	905	60
Chemung	G. M. Straitor	Feb. 22	3	166	55
Erin	E. E. Welton, R. D., Erin	1916 Dec. 27	3	168	56
Hicks	Alton C. Loomis, R. D. 2, Lockwood	Dec. 28	3	198	66
Horseheads	Walter C. King	1917 Feb. 21	3	190	63
Sullivanville	D. E. Beardsley, R. D. 3, Horseheads	1916 Dec. 29	3	183	61
CHENANGO:		1917	21	1 210	58
Bainbridge	H. H. Lyon	Jan. 22	3	131	44
North Norwich	L. J. Silvernail	Jan. 16	3	126	42
Oxford	Leland B. Smith, R. D. 4, Oxford	Jan. 18	3	157	52
Smithville Flats	E. H. Skillman	Feb. 8	3	258	86
Smyrna	C. A. Tinker	Jan. 17	3	142	47
South New Berlin	H. H. Goodnow	Jan. 25	3	125	42
South Otselic	S. L. Shapley	1916 Dec. 18	3	271	90
CLINTON:			17	940	55
Altona	J. J. Harnett	Dec. 15	2	109	55
Champlain	H. S. Bateman	Dec. 14	3	200	67
Ellenburg Center	Chas. D. Watson	Dec. 18	3	275	92
Ellenburg Depot	A. S. Lewis	Dec. 16	3	51	17
Peru	R. D. Gordon	Dec. 9	3	144	48
West Chazy	Rudolph E. Slosson	Dec. 13	3	161	54
COLUMBIA:		1917	15	960	64
Claverack	Homer J. Miller, R. D., Claverack	Feb. 3	3	185	62
Copake	Frank Sherman	Feb. 2	3	237	79
East Chatham	Ray R. Lant	Jan. 30	3	206	69
New Lebanon	B. H. Richmond, New Lebanon Center	Feb. 1	3	142	47
Spencertown	Fred C. Goodrich, East Chatham	Jan. 31	3	190	63
CORTLAND:			16	794	50
Cuyler	C. A. Midlam, R. D. 1, Cuyler	Mar. 6	2	124	62
Freetown Corners	Emory Cobb, R. D. 3, Marathon	1916 Dec. 20	2	110	55
Harford	A. H. Stewart	1917 Mar. 1	2	108	54
Homer	Fred M. Crampton, R. D., Homer	Mar. 3	3	120	40
Preble	W. W. Root	Mar. 5	3	158	53
Taylor Center	A. H. Loope, R. D. 2, Cincinnatus	1916 Dec. 19	3	120	40
* Texas Valley	Frank G. Carter, Marathon	1917 *Feb. 9–10	1	54	54
DELAWARE:		1916	20	1 168	58
Bloomville	C. O. Coan	Dec. 14	3	127	42
Downsville	Ernest M. Dann	Dec. 29	2	68	34
Margaretville	Willard F. Sanford	Dec. 28	3	297	99
North Kortright	H. W. Harper	Dec. 15	3	202	67
Sidney Center	A. M. Rutenber	Dec. 11	3	137	46
Treadwell	S. J. Scrambling	Dec. 18	3	223	74
Walton	J. H. Townsend	Dec. 12	3	114	38

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* Three sessions; first session evening February 9.

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)
REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
DUTCHESS:		1917	**21**	**1 063**	**51**
Beekman	Oscar Shaffer, Hopwell Jct.	Feb. 8	3	125	42
Chapel Corners	Benj. H. Haviland, Hyde Park	Feb. 12	3	100	33
Freedom Plains	C. H. Wardell, Lagrangeville	Feb. 10	3	172	57
Myers Corners	S. B. Gardner, Wappingers Falls	Feb. 13	3	125	42
Pleasant Plains	F. M. Barker, Staatsburg	Feb. 7	3	270	90
Union Vale	Claude Abel, Verbank	Feb. 9	3	84	28
Upper Red Hook	Curtis Fraleigh, Red Hook	Feb. 6	3	187	62
ERIE:		1916	**26**	**1 752**	**67**
Akron	E. F. Strickland	Dec. 11	3	189	63
Alden	E. W. Gillmore	Dec. 5	3	216	72
Angola	Chas. E. Backus, Derby	Dec. 16	3	93	31
Boston	Warren Needham	Dec. 9	2	112	56
Hunters Creek	E. E. Sleeper, R. D. 1, Holland	Dec. 14	3	83	28
Hunts Corners	R. B. Hull, Clarence	Dec. 12	3	228	76
Marilla	E. J. Kennedy, Porterville	Dec. 7	3	328	109
Orchard Park	Chas. H. Brown	Dec. 15	3	120	40
Springville	L. I. Clark	Dec. 8	3	383	128
ESSEX:			**16**	**1 212**	**76**
Jay	Francis D. Lennon	Dec. 12	3	548	183
Keeseville	Stanley H. Thompson	Dec. 8	3	104	35
Lake Placid	H. C. Goff, North Elba	Dec. 11	2	150	75
Minerva	Frank M. LaBar	Oct. 10	2	141	71
Reber	G. H. West	Dec. 7	3	163	54
Wadhams	P. G. Norman, R. D. 2, Westport	Dec. 6	3	106	35
FRANKLIN:			**16**	**806**	**50**
Bombay	H. A. Russell	Dec. 22	2	61	31
		1917			
Brushton	Geo. DeLong	Jan. 5	3	155	52
		1916			
Burke	A. J. Moe	Dec. 19	3	128	43
Ft. Covington	John Will	Dec. 21	3	171	57
		1917			
St. Regis Falls	M. B. Ransvell	Jan. 3	2	94	47
		1916			
Westville Corners	Henry E. Hoyt, R. D., Constable	Dec. 20	3	197	66
FULTON:		1917	**8**	**310**	**39**
Crum Creek	Floyd B. Groff, R. D. 3, St. Johnsville	Mar. 10	3	129	43
Johnstown	Chas. Veghte, R. D. 3, Johnstown	Jan. 5–6	5	181	36
GENESEE:			**23**	**1 668**	**73**
Alexander	Earl Kidder	Jan. 5	3	165	55
Batavia	R. J. Shepard	Jan. 6	3	252	84
Bethany	Scott Stevens, East Bethany	Feb. 6	2	74	37
		1916			
Darien	N. A. Harper, Darien Center	Dec. 4	3	220	73
		1917			
Elba	Jos. S. Wilford	Feb. 8	3	149	50
Fort Hill	Don. J. Renegar, LeRoy	Jan. 30	3	349	116
Pavilion Center	Chas. R. Crofoot, Pavilion	Jan. 30	3	257	86
South Byron	W. M. Brockway	Feb. 7	3	202	67
GREENE:		1916	**15**	**1 209**	**81**
Durham	W. E. Morse	Dec. 6	3	181	60
Greenville	P. W. Stevens	Dec. 4	3	323	108
Hunter	James Jackson	Dec. 8	3	332	111
Kiskatom	W. J. Saxe, R. D. 1, Catskill	Dec. 9	3	107	36
Windham	O. R. Coe	Dec. 7	3	266	89
HERKIMER:		1917	**13**	**549**	**42**
Cedarville	Fred J. Klippel	Jan. 11	3	92	31
		1916			
Fairfield	E. B. Hilligas, Middleville	Dec. 6	2	86	43

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)
REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
HERKIMER—(*Continued*)		1917			
Inghams	Jerry Snell, Little Falls	Mar. 12	2	152	76
Poland	Fred J. Cruikshank	1916 Dec. 7	3	129	43
Warren	Lester Young	1917 Jan. 12	3	90	30
JEFFERSON:			28	1 656	59
Adams Center	Norris L. Maltby	Jan. 29	3	281	94
Dexter	Fred E. George, Limerick	Jan. 26	3	140	47
Great Bend	Geo. Ware	Jan. 23	2	80	40
LaFargeville	A. W. Beckwith	Jan. 18	3	152	51
Natural Bridge	C. L. Chaffee	Jan. 24	3	133	44
St. Lawrence	V. P. Comins, R. D., Clayton	Jan. 19	3	133	44
South Rutland	H. S. Todd, East Rodman	1916 Dec. 14	3	220	73
Theresa	Glenn L. Fuller	1917 Jan. 22	3	254	85
Three Mile Bay	Ralph Rogers, Cape Vincent	Jan. 27	3	175	58
Watertown	C. L. Beecher, R. D. 1, Watertown	Jan. 20	2	88	44
LEWIS:		1916	13	892	69
Barnes Corners	C. E. Greenley	Dec. 13	3	242	81
Denmark	Elon W. Cook	Dec. 12	3	197	66
Glenfield	F. E. Vansaernam	Dec. 11	3	164	55
West Leyden	Fred P. Grubel	Dec. 8–9	4	289	72
LIVINGSTON:		1917	20	1 315	66
Conesus	Chas. McGinty	Feb. 14	3	217	72
Geneseo	J. Hunter Black	Feb. 5	3	183	61
Greigsville	Clinton B. Raymond	Feb. 1	3	149	50
Groveland	E. W. Kinney, Groveland Sta.	Feb. 2	3	214	71
Linwood	J. E. Cullings, Pavilion	Jan. 31	3	229	76
Sparta Center	Rev. Dr. Stevens, Dansville	Feb. 3	2	56	28
Springwater	Scott W. Swarts	Feb. 13	3	267	89
MADISON:			27	1 802	67
Brookfield	C. W. Camenga, R. D. 1, West Edmeston	Jan. 24	3	190	63
Chittenango	John E. Paddock	Jan. 2	3	278	93
* DeRuyter	Rev. Albert L. Briddon	*Mar. 7–8	5	403	81
Erieville	F. A. Wagner	Jan. 5	3	127	42
Fenner	A. H. Mather, R. D. 1, Cazenovia	Mar. 9	2	95	48
Hamilton	H. Langworthy	Jan. 6	2	72	36
Hubbardsville	Fay I. Rhoades	Jan. 15	3	165	55
Nelson	Keith W. Jones, R. D. 3, Cazenovia	Jan. 4	3	221	74
New Woodstock	L. L. Northrop	Mar. 8	3	251	84
MONROE:			28	1 811	65
Chili	Ray H. Deuel, Chili Station	Feb. 9	3	191	64
Gates	John C. Curry, jr., Lincoln Park	Feb. 10	3	95	32
Greece (Ridge Road)	Judson S. Kenyon, Barnard	Mar. 2	3	189	63
Hamlin	Chas. H. Kenyon, Morton	Feb. 15	3	93	31
Mendon	A. J. Hill, R. D., Victor	Mar. 6	3	202	67
Penfield	H. O. Weatherlow, R. D. 1, East Rochester	Mar. 3	3	176	59
Scottsville	John Z. Garbutt, Garbutt	Jan. 29	2	109	55
Webster	George W. Dunn	Feb. 9–10	5	626	125
West Henrietta	Howard U. Martin	Mar. 5	3	130	43
MONTGOMERY:		1916	16	957	60
Ames	L. C. Timerman, Canajoharie	Dec. 22	3	128	43
Seebers Lane Grange (Canajoharie)	Val. C. Waner, R. D., Canajoharie	1917 Jan. 3	2	167	84

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* Second day in charge of Director F. G. Helyar, State School of Agriculture, Morrisville, N. Y.

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)
REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
MONTGOMERY—(*Cont'd.*)		1917			
Freysbush	J. F. Hiller, R. D. 3, Ft. Plain.	Mar. 9	3	119	40
Mannys Corners	Mrs. Donald Grant, sr., R. D. 5, Amsterdam	Jan. 8	3	179	60
Palatine Grange	E. P. VanWie, Palatine Bridge.	Jan. 2	2	127	64
Rural Grove	M. H. Allen, R. D. 1, Sprakers.	Jan. 4	3	237	79
NASSAU:			4	131	33
Mineola	T. M. Avery	Jan. 15–16	4	131	33
NIAGARA:			23	1 877	82
Barker	John J. Connolly	Feb. 21	3	303	101
Johnson's Creek	C. Warren Silsby, R. D. 41, Gasport	Feb. 28	3	314	105
Pekin	A. J. Bridgeman, Sanborn	Feb. 19	3	272	91
Pendleton Center	L. J. P. Richards, R. D. 4, Lockport	1916 Dec. 13	3	203	68
Ransomville	W. D. Wisner	1917 Feb. 24	3	309	103
Rapids	C. Hull Burdick, R. D. 6, Lockport	Feb. 20	3	217	72
Tuscarora Reservation	Ramers Ganseworth	Feb. 17	2	68	34
Wilson	Ray M. Farley, R. D. 28, Burt.	Feb. 23	3	191	64
ONEIDA:			29	1 678	58
* Camden	W. G. Seubert, R. D. 2, Camden	*Feb. 2–3	3	69	23
Deansboro	Walter J. Day	Jan. 9	3	312	104
Holland Patent	W. I. Thomson	1916 Dec. 5	3	241	80
Knoxboro	Chas. D. Fairchild, Oriskany Falls	1917 Jan. 8	3	162	54
Marcy	Homer A. Humphrey	1916 Dec. 4	3	62	21
Paris Hill	Alonzo G. Allen, Cassville	1917 Jan. 10	2	104	52
Taberg	B. F. Ranney	1916 Dec. 15	3	125	42
Verona	Judson W. Davis, Verona Sta.	1917 Mar. 14	3	255	85
West Branch	Theodore A. Rebe	1916 Dec. 16	3	188	63
Wright's Settlement	David A. Abbuhl, R. D. 4. Rome	1917 Mar. 13	3	160	53
ONONDAGA:			27	1 644	60
Baldwinsville	Oscar J. Brown	Mar. 15	3	201	67
Borodino	Henry Eibert, R. D., Skaneateles	1916 Dec. 22	2	91	46
Lysander	Ivan E. Reddout	1917 Feb. 21–22	5	444	89
Manlius	D. S. Mawson, R. D. 2, Manlius	Jan. 3	3	149	50
Mavarino	Ambrose M. Amidon, R. D. 5, Marcellus	1916 Dec. 21	3	185	62
North Manlius	M. J. Costello, R. D. 1, Kirkville	1917 Mar. 13	3	237	79
Onondaga Hill	W. E. Bowen, R. D. 2, Syracuse	Mar. 12	3	163	54
Rockefeller Church (near Syracuse University)	Herman J. Cross, 206 Sherman Place, Syracuse	Mar. 10	2	63	32
Warner	Howard H. Marvin	Mar. 14	3	111	37

* Three sessions; first session, evening of February 2.

Institute Work, July 1, 1916, to June 30, 1917, Inclusive — (*Continued*)
Regular Institutes

County and Place	Local Correspondent	Date	Sessions	Attendance	Average per Session
Ontario:		1917	24	1 470	61
Bristol Springs	Elmer N. Coye, R. D., Naples	Feb. 23	3	205	68
Canandaigua	Levi R. Haak, R. D. 7, Canandaigua	Mar. 15	3	151	50
Hall	John W. Crosier	Mar. 1	3	173	58
Naples	C. J. Smith	Feb. 27	3	189	63
Phelps	D. J. Dunn, R. D. 4, Phelps	Mar. 13	3	158	53
Reed Corners	James Roat, R. D. 8, Canandaigua	Feb. 24	3	166	55
Seneca Castle	Levi A. Page	Mar. 14	3	204	68
Victor	A. G. Aldridge	Mar. 7	3	224	75
Orange:			21	1 063	51
Balmville	Guernsey Sheeley, R. D. 2, Newburgh	Mar. 2	3	216	72
Brookside	E. Titus, R. D. 4, Newburgh	Mar. 3	3	142	47
Bullville	R. D. Howell, Circleville	Feb. 24	3	128	43
Howells	L. H. Mapes	Feb. 22	3	139	46
Pine Bush	Wm. H. Burger	Feb. 23	3	164	55
Unionville	Milton Lain, Westtown	Feb. 26	3	212	71
Walden	J. A. Kelso	Feb. 27	3	62	21
Orleans			13	1 179	91
East Shelby	B. C. Roberts, R. D. 6, Medina	Feb. 27	2	152	76
Kendall	L. Manly Wellman	Feb. 16	3	245	82
Knowlesville	Wm. Chester Lyman, R. D. 6, Albion	Mar. 1	3	252	84
Medina	Jay E. Allis	Feb. 26	2	330	165
Waterport	R. W. Bamber	Feb. 22	3	200	67
Oswego:			39	2 311	59
Altmar	Raymond Ackley, R. D. 2, Altmar	Jan. 31	3	147	49
Amboy Center	Fred Jamieson, R. D., Williamstown	Feb. 1	3	145	48
Bernhards Bay	Harry E. Myers	Feb. 13	3	129	43
Central Square	Chas. B. Allen, R. D. 1, Central Square	Feb. 12	3	284	95
Hannibal	P. A. Welling	Feb. 7	3	323	108
Hastings	Nicholas J. Smith, Box 106, Hastings	Feb. 15	3	144	48
Lacona	A. R. Stevens	Jan. 30	3	167	56
Mt. Pleasant	Geo. A. Parker, R. D. 3, Fulton	Feb. 19	3	209	70
Palermo	M. E. Dolbear, R. D. 4, Fulton	Feb. 20	3	147	49
Parish	M. L. Moran	Feb. 16	3	253	84
Pennellville	F. W. Morgan, R. D. 2, Phoenix	Feb. 14	3	140	47
Pulaski	Norman Clark, R. D., Pulaski	Feb. 17	3	146	49
Williamstown	E. N. Harris, R. D., Williamstown	Feb. 2	3	77	26
Otsego:			25	1 655	66
Edmeston	Floyd R. Thayer	Jan. 23	3	207	69
Elk Creek	Theodore Knapp	1916 Dec. 22	2	63	32
Fly Creek	Sheldon H. Elderkin	Dec. 20	3	138	46
Garrattsville	Geo. B. Myers	Dec. 19	3	195	65
Gilbertsville	John R. Frone	1917 Jan. 26	2	138	69
Mount Vision	A. H. Straight	1916 Dec. 27	3	240	80
West Laurens	Walter Cornell	Dec. 23	3	122	41
Westville	Geo. Chamberlain, R. D., Schenevus	Dec. 21	3	177	59
Worcester	Noah E. Vredenburg, R. D. 3, Worcester	Dec. 29	3	375	125
Putnam:		1917	8	526	66
Adams Corners	Leander Currey, Tompkins Corners	Feb. 14	3	222	74
Mahopac	F. J. Ganong, R. D., Mahopac	Feb. 15	2	46	23
Patterson	E. F. Hayt, Brewster	Feb. 16	3	258	86

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — *(Continued)*

REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
Rensselaer:		1917	**18**	**1 029**	**57**
East Greenbush	Frank VanA. Miller, R. D. 2, East Greenbush	Jan. 29	3	141	47
East Poestenkill	Rev. Ernest F. G. Meyer, R. D. 2, Troy	Jan. 26	3	101	34
Johnsonville	C. M. Herrington	Jan. 15	3	153	51
Melrose	C. B. Hanaman	Jan. 24	3	222	74
Raymertown	E. L. Button, Melrose	Jan. 25	3	302	101
Wynantskill	Chas. B. Hidley	Jan. 27	3	110	37
Rockland:			**5**	**235**	**47**
Tallmans	T. T. Husson, Pomona	Feb. 20–21	5	235	47
St. Lawrence:			**39**	**3 016**	**77**
Crary Mills	J. E. Hale, R. D. 5, Potsdam	Jan. 13	3	206	69
DeKalb Junction	R. E. Piercy, R. D. 2, DeKalb Junction	Jan. 11	3	117	39
DePeyster	Roy Badger	Jan. 15	3	327	109
Fine	Rev. Chas. F. Chubb	Jan. 25	3	260	87
Gouverneur	Curtis G. Mellen	Jan. 17	3	201	67
Helena	Carl H. Hamlin	Jan. 2	3	294	98
Louisville	Jas. D. Bradford, R. D. 1, Massena	Jan. 10	3	274	91
Madrid	G. Foster Tabor	Jan. 8	3	139	46
Nicholville	F. L. Richardson	Jan. 4	3	211	70
Richville	C. V. White	Jan. 16	3	270	90
Russell	M. J. Endersbee, R.D., Russell	Jan. 12	3	140	47
Waddington	Edward L. Fay, R. D. 1, Waddington	Jan. 9	3	216	72
Winthrop	H. L. Davis	Jan. 6	3	361	120
Saratoga:			**18**	**856**	**48**
Charlton	C. S. Haynes, R. D. 1, Ballston Lake	Jan. 10	3	142	47
East Galway	Everett H. Mastin	Jan. 11	3	178	59
Gansevoort	Geo. B. Eddy	1916 Dec. 4	3	113	38
Greenfield Center	S. E. Darrow	1917 Jan. 12	3	183	61
Maltaville	Elmer Mealio, R. D. 3, Mechanicville	Jan. 22	3	98	33
Wilton	Arthur A. Carr, R. D. 2, Saratoga Springs	Jan. 13	3	142	47
Schenectady:		1916	**8**	**564**	**71**
Braman Corners	Clarence Foote, R. D. 1, Delanson	Dec. 15	3	189	63
Glenville	Mina Van Epps, Hoffmans	1917 Jan. 9	3	246	82
Quaker Street	Asa M. Gaige, Duanesburg	1916 Dec. 16	2	129	65
Schoharie:			**17**	**892**	**52**
Breakabeen	W. H. Travis, R. D. 1, Middleburg	Dec. 19	3	177	59
Gilboa	M. Leland Lewis	Dec. 27	3	125	42
Jefferson	F. H. Foote	Dec. 16	3	156	52
Schoharie	Perry E. Taylor	Dec. 18	3	117	39
Sharon Springs	Wm. M. Kling	Dec. 21	2	107	54
Sloansville	John Estes	Dec. 20	3	210	70
Schuyler:		1917	**15**	**1 073**	**72**
Catherine	Milo Hitchcock, R. D., Horseheads	Mar. 10	3	202	67
Mecklenburg	B. L. Hathaway, Alpine	Mar. 9	3	217	72
Moreland	A. W. Russell, R. D. 2, Beaver Dams	Mar. 8	3	120	40
Reading Center	Ernest G. Love, R. D., Rock Stream	Mar. 7	3	255	85
Tyrone	Edward Green, R. D. 18, Dundee	Mar. 6	3	279	93

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
SENECA:		1917	**9**	**403**	**45**
Covert	M. Coburn Cole, Trumansburg	Feb. 1	3	203	68
Romulus	E. L. Cook	Feb. 2	3	119	40
Seneca Falls	Wm. T. Beach, R. D. 3, Seneca Falls	Feb. 3	3	81	27
STEUBEN:			**31**	**2 594**	**84**
Atlanta	C. G. Gray, North Cohocton	Feb. 12	3	123	41
Bath	H. M. Noble, R. D. 5, Bath	Feb. 16–17	5	379	76
Campbell	John C. Tharp, R. D. 2 Campbell	Feb. 20	3	215	72
Caton	S. B. Hill, R. D. 2, Corning	Feb. 8	3	205	68
Cohocton	Clarence J. Flint	Feb. 9	3	241	80
Greenwood	T. N. Blair	Feb. 6	1	100	100
Ingleside	C. E. Noble, R. D. 3, Prattsburg	Feb. 15	3	404	135
North Urbana	E. F. Gleason, Hammondsport	Feb. 19	3	297	99
Prattsburg	J. W. Gelder	Feb. 10	3	183	61
Stephens Mills	Mrs. C. C. Zimmerman, R. D. 3, Arkport	Feb. 3	1	25	25
Troupsburg	Albert M. Potter	Feb. 7	3	422	141
SUFFOLK:			**16**	**987**	**62**
Bridgehampton	Henry T. Haney	Jan. 19–20	5	440	88
Mattituck	A. L. Downs	Jan. 22–23	5	369	74
Port Jefferson Sta.	Edward F. Kinsey, Terryville	Jan. 17	3	112	37
Yaphank	C. H. Hand	Jan. 18	3	66	22
SULLIVAN:		1916	**18**	**1 445**	**80**
Bethel	Calvin Millen	Dec. 8	3	170	57
Grahamsville	N. H. Black	Dec. 4	3	331	110
Hortonville	Christian Maurer, R. D. 2, Callicoon	Dec. 6	3	266	89
Lake Huntington	H. J. Tyler, Cochecton Center	Dec. 7	3	194	65
Monticello	Walter G. Prince	Dec. 9	3	149	50
Youngsville	Wm. Rittershausen	Dec. 5	3	355	112
TIOGA:		1917	**17**	**1 523**	**90**
Apalachin	C. F. Giles	Feb. 5	2	147	74
Berkshire	Cecil Royce	Feb. 28	3	210	70
Glencairn	P. H. Wheeler, R. D. 2, Waverly	Feb. 23	3	176	59
Nichols	John E. Wright	Feb. 26	3	222	74
Owego	Rev. Sidney Winter	Feb. 27	3	196	65
Waverly	Frank E. Munn	Feb. 24	3	572	191
TOMPKINS:			**14**	**892**	**64**
Danby	Wm. H. Jones, R. D. 36. Ithaca	Jan. 30	3	178	59
Enfield Center	Fred D. Rumsey, R. D. 28, Newfield	Jan. 31	3	174	58
McLean	G. B. McKinney, R. D. 5, Cortland	Mar. 2	3	259	86
So. Lansing	Geo. Lanterman, R. D. 1, South Lansing	Jan. 29	2	151	76
West Groton	Garfield Holden, R. D., Groton	Mar. 15	3	130	43
ULSTER:			**18**	**906**	**50**
Brunswick	Milton S. Hasbrouck, R. D., Wallkill	Feb. 28	3	133	44
Clintondale	W. D. Tallman, R. D. 4, Highland	Mar. 5	3	157	52
Mt. Marion	H. Clinton Finger	Mar. 8	3	127	42
Plattekill	Geo. A. Fowler, R. D. 3, Wallkill	Mar. 1	3	212	71
Stone Ridge	C. C. Hardenbergh	Mar. 7	3	164	55
Ulster Park	Geo. F. House	Mar. 6	3	113	38

INSTITUTE WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Concluded*)

REGULAR INSTITUTES

COUNTY AND PLACE	LOCAL CORRESPONDENT	DATE	SESSIONS	ATTENDANCE	AVERAGE PER SESSION
WARREN:		1916	6	279	47
Hague	S. Harry Miller	Oct. 11	2	129	65
Queensbury	Glen H. Hubbell, R. D. 1, Glens Falls	Oct. 12	2	109	55
Warrensburg	F. J. Harris	Oct. 13	2	41	21
WASHINGTON:		1917	20	1 508	75
Cambridge	Harold Becker	Jan. 16	3	190	63
Easton	Jacob F. Pratt, R. D. 1, Schaghticoke	Jan. 23	3	243	81
Fort Miller	James D. Doig, R. D. 5, Greenwich	Jan. 20	3	170	57
Hartford	J. H. Beadle	Jan. 19	3	274	91
Putnam	Henry L. Roberts, Putnam Station	1916 Dec. 5	2	115	58
Salem	Wm. S. Barker	1917 Jan. 17	3	223	74
West Hebron	Wm. E. Getty, R. D. 2, Granville	Jan. 18	3	293	98
WAYNE:			24	1 815	76
Alton	J. M. Buerman	Feb. 8	3	246	82
Clyde	Chas. G. Roy	Mar. 10	3	355	118
Lincoln	E. R. Burdick, Ontario	Feb. 13	3	184	61
Macedon Center	Philander Packer, Macedon	Mar. 8	3	288	96
Marion	L. J. Sweezey	Mar. 9	3	209	70
Ontario	C. C. Norton	Feb. 14	3	219	73
South Butler	Geo. W. Wilson	Mar. 12	3	170	57
Williamson	J. D. Ameele	Feb. 12	3	144	48
WESTCHESTER:			5	758	152
Cortland Grange	F. Byron Travis, Peekskill	Feb. 19	3	88	29
Lincolndale	Brother Henry	Feb. 17	2	670	335
WYOMING:			19	1 519	80
Castile	E. V. Kingsley	Jan. 27	3	149	50
Cowlesville	R. J. Patch	1916 Dec. 6	3	166	55
*Currier's Grange	H. S. Nichols, Java	1917 *Jan. 2–4	5	641	128
Java Village	Jos. Herrman	Jan. 18	2	129	65
Pike	Olin Streeter	Jan. 26	3	172	57
Warsaw	M. E. Slocum	Jan. 29	3	262	87
YATES:			12	709	59
Bellona	Rev. T. Maxwell Morrison	Mar. 2	3	142	47
Benton Center	Isaac Clark, R. D. 9, Penn Yan	Mar. 3	3	127	42
Lakemont	Henry J. Roof, Dundee	Mar. 5	3	121	40
Middlesex	Herbert Foster, R. D., Rushville	Feb. 28	3	319	106
Total		361 meetings	1 051	68 204	65

Local people contributed $40 for extra two days.

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE

COUNTY AND PLACE	LADY CORRESPONDENT	DATE		SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
				No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
ALBANY:				5	197	10	285	....	....
Altamont	....	Oct.	24, 1916	....	......	....	......	1	50
Altamont	....	Apr.	10, 1917	....	......	....	......	1	51
Becker's Corners	Mrs. Arthur Blodgett, Glenmont	Dec.	11, 1916	1	23	2	23	....	....
Coeymans Hollow	Mrs. Elmer V. Shear, Ravena	Dec.	12, 1916	1	40	2	38	....	....
Guilderland Center	Mrs. John H. York	Dec.	13, 1916	1	24	2	28	....	....
Knox	Mrs. Amaziah Saddlemire	Dec.	14, 1916	1	34	1	38	....	....
Preston Hollow	Mrs. F. L. Ford	Dec.	5, 1916	1	76	3	158	....	....
ALLEGANY:				8	309	3	40	....	....
Angelica	Mrs. J. C. Phippen, Belmont, R. D. 4	Jan.	24, 1917	1	38	....	......	....	....
Canaseraga	Mrs. Leland Gould	Jan.	25, 1917	1	20	....	......	....	....
Caneadea	Mrs. Clarence Washbon	Feb.	1, 1917	1	39	....	......	....	....
Richburg	Mrs. Mabel Coats	Jan.	23, 1917	1	54	....	......	....	....
Rushford	Mrs. Gertrude Morris, Houghton, R. D.	Jan.	31, 1917	1	47	....	......	....	....
Short Tract	Mrs. Ella Lilly, Fillmore	Feb.	2, 1917	1	53	....	......	....	....
Stanards	Mrs. Milton Wright, Wellsville, R. D. 2	Feb.	5, 1917	1	31	3	40	....	....
West Clarksville	Mrs. G. A. Goss	Jan.	22, 1917	1	27	....	......	....	....

INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE		SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
				No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
BROOME:				6	172	7	82	....	....
Harpursville	Mrs. John Allen	Jan.	19, 1917	1	29	2	12	....	....
Maine	Mrs. L. J. Emerson, Lestershire, R. D. 1	Feb.	6, 1917	1	15	1	17	....	....
North Colesville	Mrs. Grace Watrous, Tunnel	Feb.	7, 1917	1	50	....	......	....	....
Upper Lisle	Mrs. E. H. Porter	Feb.	9, 1917	1	29	1	36	....	....
Vestal	Mrs. Carrie Pierce	Jan.	27, 1917	1	22	2	16	....	....
Windsor	Mrs. L. B. Edwards, Susquehanna, Pa., R. D. 6	Jan.	20, 1917	1	27	1	1	....	....
CATTARAUGUS:				8	304	....	......	....	....
Conewango	Mrs. H. L. Mason	Jan.	5, 1917	1	40	....	......	....	....
Cottage	Miss Daisy Smith, South Dayton, R. D.	Jan.	4, 1917	1	60	....	......	....	....
Delavan	Miss Mayme Worden	Jan.	17, 1917	1	26	....	......	....	....
Elkdale	Miss Mary Boyce	Jan:	13, 1917	1	33	....	......	....	....
Farmersville Station	Mrs. C. F. Agett	Jan.	20, 1917	1	60	....	......	....	....
Ischua	Mrs. E. W. Williams	Jan.	15, 1917	1	26	....	......	....	....
Lyndon Center	Mrs. Robert King, Franklinville, R. D. 2	Jan.	16, 1917	1	34	....	......	....	....
Mansfield	Mrs. Victor Fargo, Little Valley, R. D. 1	Jan.	12, 1917	1	25	....	......	....	....

CAYUGA:				7	211	13	226	....	....
Conquest	Mrs. Daniel Millen, Port Byron, R. D. 39	Feb.	23, 1917	1	19	2	24	....	....
Fair Haven	Mrs. S. B. Simmons, Sterling Station	Feb.	6, 1917	....	......	2	10	....	....
Five Corners	Mrs. Hattie Ferris, Atwater	Mar.	12, 1917	1	48	2	32	....	....
Four Town	Mrs. Frank Elliot, Moravia	Mar.	14, 1917	1	40	2	73	....	....
Port Byron	Mrs. W. H. Root	Feb.	5, 1917	....	......	....	......	....	....
Powers Corners	Mrs. G. H. Nickerson, Auburn, R. D. 3	Mar.	12, 1917	1	24	1	24	....	....
Sennett	Mrs. Geo. Townsend, Sennett, R. D. 10	Mar.	15, 1917	1	46	2	45	....	....
Sherwood	Miss Mary Casler, Merrifield	Mar.	13, 1917	1	21	2	18	....	....
CHAUTAUQUA:				12	435	9	68	....	....
Arkwright	Mrs. D. M. Cole, Fredonia, R. D	Jan.	2, 1917	1	16	....	......	....	....
Clymer	Mrs. Lettie A. Hewes	Dec.	20, 1916	1	59	2	6	....	....
De Wittville	Mrs. Laura S. Kirkland	Jan.	8, 1917	1	31	....	......	....	....
Ellington	Mrs. Minnie Rublee, Conewango Valley	Jan.	6, 1917	1	62	....	......	....	....
Findley Lake	Mrs. Jason Skellie	Dec.	19, 1916	1	68	2	7	....	....
Forestville	Mrs. W. L. Tanner	Jan.	3, 1917	1	16	....	......	....	....
Frewsburg	Miss Adaline Wilsie, Jamestown	Jan.	11, 1917	1	30	....	......	....	....
Gerry	Mrs. M. McDonald	Jan.	10, 1917	1	40	....	......	....	....
Ripley	Mrs. Cora Pitt	Dec.	18, 1916	1	33	2	27	....	....
Stedman	Mrs. Myra Anderson Sherman	Dec.	22, 1916	1	9	1	4	....	....
Stockton	Mrs. Lena Nelson	Jan.	9, 1917	1	47	....	......	....	....
Watts Flats	Mrs. A. L. Richardson	Dec.	21, 1916	1	24	2	24	....	....
CHEMUNG:				5	137	9	82	....	....
Chemung	Mrs. F. C. Hicks	Feb.	22, 1917	1	28	2	11	....	....
Erin	Mrs. Marcia Hallenbeck	Dec.	27, 1916	1	38	....	......	....	....
Hicks	Miss Bernice Groves, Lockwood	Dec.	28, 1916	1	22	2	25	....	....
Horseheads	Mrs. E. Brown, Horseheads, R. D. 1	Feb.	21, 1917	1	22	3	16	....	....
Sullivanville	Mrs. Carrie Hummer, Horseheads	Dec.	29, 1916	1	27	2	30	....	....
CHENANGO:				7	213	10	149	....	....
Bainbridge	Mrs. F. I. Fletcher, Bainbridge, R. D. 3	Jan.	22, 1917	1	23	2	21	....	....
North Norwich	Mrs. Charles Jenks	Jan.	16, 1917	1	31	2	25	....	....
Oxford	Mrs. Fred Eccleson	Jan.	18, 1917	1	20	....	......	....	....
Smithville Flats	Mrs. Geo. McComb	Feb.	8, 1917	1	48	2	39	....	....

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
CHENANGO — (*Continued*)								
Smyrna	Mrs. Wm. Chapman	Jan. 17, 1917	1	27	1	7	....	....
South New Berlin	Miss Ethel Gage	Jan. 25, 1917	1	25	2	32	....	....
South Otselic	Mrs. Wallace Miller	Dec. 18, 1916	1	39	1	25	....	....
CLINTON:			6	139	9	161	....	....
Altona	Miss Margaret Hanley	Dec. 15, 1916	1	29	1	17	....	....
Champlain	Miss E. Berthrand	Dec. 14, 1916	1	28	2	30	....	....
Ellenburg Center	Mrs. F. L. Honsinger	Dec. 18, 1916	1	29	2	46	....	....
Ellenburg Depot	Mrs. Irving L. Sheldon	Dec. 16, 1916	1	3	1	4	....	....
Peru	Mrs. Datus Clark	Dec. 9, 1916	1	18	1	30	....	....
West Chazy	Mrs. F. J. Lapierre	Dec. 13, 1916	1	32	2	34	....	....
COLUMBIA:			5	188	10	194	....	....
Claverack	Mrs. Chas. E. Barnard	Feb. 3, 1917	1	25	2	35	....	....
Copake	Mrs. W. A. Dean	Feb. 2, 1917	1	54	2	65	....	....
East Chatham	Mrs. Chas. G. Brown	Jan. 30, 1917	1	51	2	45	....	....
New Lebanon	Miss Fannie J. Sackett	Feb. 1, 1917	1	27	2	14	....	....
Spencertown	Mrs. Chas. E. Strever, Chatham, R. F. D.	Jan. 31, 1917	1	31	2	35	....	....

CORTLAND:				7	196	10	97	....	....
Cuyler	Mrs. L. R. Cossitt	Mar.	6, 1917	1	36	1	22	....	....
Freetown Corners	Mrs. Rachel Coolbaugh, McGraw	Dec.	20, 1916	1	20	1	18	....	....
Harford	Mrs. C. W. Conrad	Mar.	1, 1917	1	38	1	8	....	....
Homer	Mrs. H. F. Nelson, Cortland, R. D. 7	Mar.	3, 1917	1	22	3	11	....	....
Preble	Mrs. J. K. Henderson	Mar.	5, 1917	1	40	2	14	....	....
Taylor Center	Mrs. Scott Brooks, Cincinnatus, R. D	Dec.	19, 1916	1	18	2	24	....	....
*Texas Valley	Mrs. James Lull, Marathon	*Feb.	9–10, 1917	1	22	....	......	....	....
DELAWARE:				7	201	5	68	....	....
Bloomville	Mrs. J. B. Mattice	Dec.	14, 1916	1	34	....	......	....	....
Downsville	Mrs. A. D. Rowell, Colchester	Dec.	29, 1916	1	13	1	6	....	....
Margaretville	Mrs. S. A. Dugan	Dec.	28, 1916	1	35	2	24	....	....
North Kortright	Mrs. G. H. Rice, No. Harpersfield	Dec.	15, 1916	1	30	1	18	....	....
Sidney Center	Mrs. C. W. Sagendorf	Dec.	11, 1916	1	40	....	......	....	....
Treadwell	Mrs. Romain Jackson	Dec.	18, 1916	1	32	1	20	....	....
Walton	Mrs. Horace E. North	Dec.	12, 1916	1	17	....	......	....	....
DUTCHESS:				7	196	12	227	....	....
Beekman	Mrs. Arthur Holmes, Poughquag	Feb.	8, 1917	1	27	2	34	....	....
Chapel Corners	Mrs. A. A. Lyon, Hyde Park	Feb.	12, 1917	1	13	1	22	....	....
Freedom Plains	Mrs. Emma L. Brownell, LaGrangeville	Feb.	10, 1917	1	25	1	13	....	....
Myers Corners	Mrs. S. B. Gardner, Wappingers Falls	Feb.	13, 1917	1	26	2	36	....	....
Pleasant Plains	Mrs. J. C. Cookingham, Staatsburg	Feb.	7, 1917	1	53	2	64	....	....
Union Vale	Miss Mary Hamm, Verbank	Feb.	9, 1917	1	13	2	15	....	....
Upper Red Hook	Mrs. John Kerley, Red Hook	Feb.	6, 1917	1	39	2	43	....	....
ERIE:				10	470	13	281	....	....
Akron	Mrs. F. E. Eldred	Dec.	11, 1916	1	42	2	21	....	....
Alden	Mrs. E. W. Gillmore	Dec.	5, 1916	2	70	1	4	....	....
Angola	Mrs. B. F. Davis	Dec.	16, 1916	1	18	2	19	....	....
Boston	Mrs. Ray Whiting	Dec.	9, 1916	1	32	....	......	....	....
Hunters Creek	Mrs. Chas. Seadeeck, Holland	Dec.	14, 1916	1	18	2	17	....	....
Hunts Corners	Mrs. Alice Miller, Akron	Dec.	12, 1916	1	48	2	58	....	....

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* NOTE.— Three sessions; First session, evening February 9.

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE		SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
				No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
ERIE — (*Continued*)									
Marilla	Mrs. L. B. Lougee	Dec.	7, 1916	1	69	2	82	....	....
Orchard Park	Mrs. Clara Fisher	Dec.	15, 1916	1	29	1	20	....	....
Springville	Mrs. Frank Wyatt	Dec.	8, 1916	1	144	1	60	....	....
ESSEX:				6	282	11	289	....	....
Jay	Mrs. Fay Wilmarth	Dec.	12, 1916	1	103	3	125	....	....
Keeseville	Mrs. A. H. Mace	Dec.	8, 1916	1	17	2	24	....	....
Lake Placid	Mrs. Halsey Bushy	Dec.	11, 1916	1	40	1	35	....	....
Minerva	Mrs. B. S. Van Vleet, Igerna	Oct.	10, 1916	1	54	2	26	....	....
Reber	Mrs. W. M. Hutchins, Willsboro	Dec.	7, 1916	1	50	2	56	....	....
Wadhams	Mrs. Thomas Sayre	Dec.	6, 1916	1	18	1	23	....	....
FRANKLIN:				6	157	6	102	....	....
Bombay	Mrs. E. R. Blanchard	Dec.	27, 1916	1	7	....	....	....	....
Brushton	Mrs. Herbert Aldrich, North Bangor	Jan.	5, 1917	1	41	2	29	....	....
Burke	Mrs. Elmer Mason	Dec.	19, 1916	1	22	1	13	....	....

Ft. Covington	Mrs. M. P. Merrick	Dec.	21, 1916	1	28	1	24	....	....
St. Regis Falls	Mrs. Amos Stacey	Jan.	3, 1917	1	29	1	9	....	....
Westville Corners	Mrs. J. F. Fallon	Dec.	20, 1916	1	30	1	27	....	....
FULTON:				3	51	3	37	....	....
Crum Creek	Mrs. Vernon Casler, St. Johnsville	Mar.	10, 1917	1	23	1	23	....	....
Johnstown	Mrs. Archibald W. Palmer	Jan.	5–6, 1917	2	28	2	14	....	....
GENESEE:				8	328	12	264	....	....
Alexander	Mrs. Earl Kidder	Jan.	5, 1917	1	38	2	32	....	....
Batavia	Mrs. L. C. Higley	Jan.	6, 1917	1	75	2	28	....	....
Bethany	Mrs. Chas. Cutliffe, East Bethany	Feb.	6, 1917	1	16	2	18	....	....
Darien	Miss Marion Rogers	Dec.	4, 1916	1	46	2	63	....	....
Elba	Mrs. Viola Jones	Feb.	8, 1917	1	26	1	26	....	....
Fort Hill	Mrs. Ralph McVean, Leroy	Jan.	30, 1917	1	47	2	73	....	....
Pavilion Center	Mrs. Grant Bower, Pavilion	Jan.	30, 1917	1	47	....	......	....	....
South Byron	Mrs. F. C. Walker	Feb.	7, 1917	1	33	1	24	....	....
GREENE:				5	243	11	332	....	....
Durham	Mrs. J. H. Harrington	Dec.	6, 1916	1	30	3	35	....	....
Greenville	Mrs. G. L. Cook	Dec.	4, 1916	1	89	2	83	....	....
Hunter	Mrs. Richard Braunstein	Dec.	8, 1916	1	50	2	115	....	....
Kiskatom	Mrs. Oliver Palmer, Catskill, R. D. 1	Dec.	9, 1916	1	22	2	37	....	....
Windham	Mrs. John Howard	Dec.	7, 1916	1	52	2	62	....	....
HERKIMER:				5	112	10	79	....	....
Cedarville	Mrs. W. N. Morgan	Jan.	11, 1917	1	14	2	9	....	....
Fairfield	Mrs. James Thompson, Little Falls, R. D.	Dec.	6, 1916	1	14	2	13	....	....
Inghams	Miss Adaline Feeter, Little Falls, R. D. 2.	Mar.	12, 1917	1	48	2	29	....	....
Poland	Mrs. Frank Howe	Dec.	7, 1916	1	15	2	9	....	....
Warren	Miss Blanche Bailey	Jan.	12, 1917	1	21	2	19	....	....
JEFFERSON:				10	426	13	290	....	....
Adams Center	Mrs. Wm. Flint	Jan.	29, 1917	1	60	2	56	....	....
Dexter	Mrs. Edward Anderson	Jan.	26, 1917	1	26	1	15	....	....

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
JEFFERSON — *Continued*								
Great Bend	Mrs. Geo. Craik	Jan. 23, 1917	1	30	10	10	....	....
LaFargeville	Mrs. L. W. Burton	Jan. 18, 1917	1	30	1	31	....	....
Natural Bridge	Mrs. Fred J. Derby	Jan. 24, 1917	1	45	1	18	....	....
St. Lawrence	Mrs. Ernest Glass, Clayton, R. D	Jan. 19, 1917	1	23	1	29	....	....
South Rutland	Mrs. G. F. Butts	Dec. 14, 1916	1	42	2	46	....	....
Theresa	Mrs. N. H. Schell	Jan. 22, 1917	1	81	1	35	....	....
Three Mile Bay	Mrs. Rollo Van Dorn	Jan. 27, 1917	1	55	1	6	....	....
Watertown	Mrs. C. L. Beecher, Watertown, R. D. 1	Jan. 20, 1917	1	34	2	44	....	....
LEWIS:			4	178	6	146	....	....
Barnes Corners	Mrs. R. M. Jones	Dec. 13, 1916	1	51	2	51	....	....
Denmark	Mrs. D. N. Bratzman	Dec. 12, 1916	1	47	2	52	....	....
Glenfield	Mrs. Fred Ridlespraker	Dec. 11, 1916	1	32	2	43	....	....
West Leyden	Mrs. Bessie J. Trainor	Dec, 8–9, 1916	1	48	....	......	....	....
LIVINGSTON:			6	241	12	258	....	....
Conesus	Mrs. G. C. McNinch, Conesus, R. D. 1	Feb. 14, 1917	1	40	1	40	....	....
Geneseo	Mrs. C. M. De Revere	Feb. 5, 1917	1	32	2	27	....	....

Greigsville	Miss Jennie Allen	Feb.	1, 1917	1	28	2	26	....	....
Groveland	Mrs. M. L. Gamble	Feb.	2, 1917	1	43	2	65	....	....
Linwood	Mrs. John Johnston	Jan.	31, 1917	1	28	2	42	....	....
Sparta Center	Mrs. F. M. Shafer, Dansville, R. D. 1	Feb.	3, 1917	....	....	2	16	....	....
Springwater	Mrs. Vinnie Hyde	Feb.	13, 1917	1	70	1	42	....	....
MADISON:				9	422	14	221		
Brookfield	Mrs. Frank Cheeseborough	Jan.	24, 1917	1	50	2	33	....	....
Chittenango	Mrs. J. H. Ball	Jan.	2, 1917	1	68	2	10	....	....
*DeRuyter	Mrs. Flossie Lewis	*Mar.	7-8, 1917	1	65	2	52	....	....
Erieville	Mrs. Theodore Taintor	Jan.	5, 1917	1	22	1	3	....	....
Fenner	Mrs. Louis Davis, Cazenovia	Mar.	9, 1917	1	35	1	10	....	....
Hamilton	Mrs. George Garrett	Jan.	6, 1917	1	12	2	12	....	....
Hubbardsville	Miss Ora Allen	Jan.	15, 1917	1	55	1	18	....	....
Nelson	Mrs. C. D. English, Cazenovia, R. D. 3	Jan.	4, 1917	1	45	2	40	....	....
New Woodstock	Mrs. L. L. Northrop	Mar.	8, 1917	1	70	1	43	....	....
MONROE:				9	311	10	101	....	....
Chili	Mrs. Ward Hawley, Chili Station	Feb.	9, 1917	1	48	2	34	....	....
Gates	Mrs. E. Weide, Lincoln Park	Feb.	10, 1917	1	22	1	16	....	....
Greece (Ridge Road)	Mrs. W. James, Charlotte, R. D	Mar.	2, 1917	1	39	2	8	....	....
Hamlin	Mrs. Chas. H. Kenyon, Morton	Feb.	15, 1917	1	21	2	13	....	....
Mendon	Mrs. A. J. Hill, Victor, R. D	Mar.	6, 1917	1	27	2	29	....	....
Penfield	Mrs. Cora Weatherlow	Mar.	3, 1917	1	33	....	......	....	....
Scottsville	Miss Martha Stokoe	Jan.	29, 1917	1	26	1	1	....	....
Webster	Mrs. Geo. W. Dunn	Feb.	9-10, 1917	1	68	....	......	....	....
West Henrietta	Mrs. Frank Martin	Mar.	5, 1917	1	27	....	......	....	....
MONTGOMERY:				6	163	11	233	....	....
Ames	Mrs. L. A. Roberts	Dec.	22, 1916	1	17	2	22	....	....
Amsterdam	....	June	26, 1917	....	....	....	......	1	60
Canajoharie	....	June	28, 1917	....	....	....	......	1	73

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* Second day in charge of Director F. G. Helyar, State School of Agriculture, Morrisville, N. Y.

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
MONTGOMERY — (*Continued*)								
Seeber's Lane Grange (Canajoharie)........	Miss Libbie Shineman, Canajoharie, R. D.	Jan. 3, 1917	1	34	1	17	....	....
Fonda................	....	June 27, 1917	....	......	....	......	2	119
Freysbush..............	Mrs. Howard Moyer, Fort Plain, R. D...	Mar. 9, 1917	1	20	2	30	....	....
Mannys Corners........	Mrs. Lewis Pepper, Amsterdam, R. D. 5..	Jan. 8, 1917	1	23	2	33	....	....
Palatine Grange........	....	June 28, 1917	....	......	....	......	1	51
Palatine Grange........	Miss Nancy Quackenbush, Palatine Bridge	Jan. 2, 1917	1	29	1	31	....	....
Rural Grove............	Mrs. A. H. Dievendorf, Sprakers........	Jan. 4, 1917	1	40	3	100	....	....
St. Johnsville..........	....	June 29, 1917	....	......	....	......	2	110
NASSAU:			1	3	....	......	....	....
Mineola..............	Mrs. Wm. Calvert, Wantagh..........	Jan. 15-16, 1917	1	3	....	......	1	1
NIAGARA:			8	369	11	251	....	....
Barker................	Mrs. J. W. Featherstone..............	Feb. 21, 1917	1	46	1	26	....	....
Johnson's Creek........	Mrs. H. J. Silsby, Gasport............	Feb. 28, 1917	1	60	1	19	....	....

Pekin	Mrs. Alice McEwen, Sanborn	Feb.	19, 1917	1	65	2	83	....	....
Pendleton Center	Mrs. Joseph Ellis, Lockport, R. D. 4	Dec.	13, 1916	1	42	3	72	....	....
Ransomville	Mrs. Jane W. Clarke	Feb.	24, 1917	1	61	....	......	....	....
Rapids	Miss M. Laraway, Clarence Center, R. D. 1	Feb.	20, 1917	1	40	1	22	....	....
Tuscarora Reservation	Mrs. H. M. Jack, Lewiston, R. D. 19	Feb.	17, 1917	1	12	1	8	....	....
Wilson	Mrs. C. S. Gifford	Feb.	23, 1917	1	43	2	21	....	....
ONEIDA:				10	337	20	314	....	....
*Camden	Mrs. W. G. Seubert, Camden, R. D. 2	*Feb.	2-3, 1917	1	3	1	11	....	....
Deansboro	Miss Jessie Young	Jan.	9, 1917	1	56	2	61	....	....
Holland Patent	Mrs. Dana Thomas, Stittville	Dec.	5, 1916	1	28	2	33	....	....
Knoxboro	Mrs. M. A. Kimball, Oriskany Falls	Jan.	8, 1917	1	21	2	30	....	....
Marcy	Miss Ruth Marson	Dec.	4, 1916	1	16	3	22	....	....
Paris Hill	Mrs. Newton Wood, Waterville, R. D	Jan.	10, 1917	1	27	1	8	....	....
Taberg	Mrs. B. F. Ranney	Dec.	15, 1916	1	18	2	16	....	....
Verona	Mrs. Frank Mathewson	Mar.	14, 1917	1	112	2	19	....	....
West Branch	Mrs. C. E. Potter	Dec.	16, 1916	1	28	2	48	....	....
Wright's Settlement	Miss Fannie E. Abbuhl, Rome, R. D. 4	Mar.	13, 1917	1	28	3	66	....	....
ONONDAGA:				9	284	18	264	....	....
Baldwinsville	Miss Lettie Crego	Mar.	15, 1917	1	45	2	28	....	....
Borodino	Mrs. Glenn Bass, R. D. 1, Marietta	Dec.	22, 1916	1	15	2	5	....	....
Lysander	Mrs. Lethea Burt, R. D., Lysander	Feb.	21-22, 1917	1	32	3	54	....	....
Manlius	Mrs. G. F. Butts	Jan.	3, 1917	1	38	2	8	....	....
Mavarino	Mrs. Lottie Amidon, R. D. 5, Marcellus	Dec.	21, 1916	1	28	2	40	....	....
North Manlius	Miss Florence M. Hubbs, R. D. 3, Kirkville	Mar.	13, 1917	1	53	2	57	....	....
Onondaga Hill	Mrs. A. P. Bartlett, Onondaga	Mar.	12, 1917	1	39	2	38	....	....
Rockefeller Church (Near Syracuse University)	Mrs. C. E. Smith, 895 So. Beech St., Syracuse	Mar.	10, 1917	1	18	2	28	....	....
Warner	Mrs. E. Dixon, Memphis	Mar.	14, 1917	1	16	1	6	....	....

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* Three sessions; First session evening of February 2.

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
ONTARIO:			8	279	10	144	....	....
Bristol Springs	Mrs. E. M. Richards, R. D., Naples	Feb. 26, 1917	1	30	2	38	....	....
Canandaigua	Mrs. J. K. Hair	Mar. 15, 1917	1	18	1	3	....	....
Hall	Miss Maude Fish	Mar. 1, 1917	1	35	2	41	....	....
Naples	Mrs. C. J. Smith	Feb. 27, 1917	1	52	2	30	....	....
Phelps	Mrs. D. J. Dunn, R. D. 4, Phelps	Mar. 13, 1917	1	24	....	......	....	....
Reeds Corners	Mrs. Lewis Lincoln, R. D. 1, Canandaigua	Feb. 24, 1917	1	38	2	31	....	....
Seneca Castle	Mrs. E. S. Teall	Mar. 14, 1917	1	34	....	......	....	....
Victor	Miss Helen Ketchum	Mar. 7, 1917	1	48	1	1	....	....
ORANGE:			7	253	10	196	....	....
Balmville	Miss Natalie C. Barnes, Newburgh	Mar. 2, 1917	1	58	2	57	....	....
Brookside	Mrs. C. O. Warford, R. D., Newburgh	Mar. 3, 1917	1	29	1	1	....	....
Bullville	Mrs. J. W. Black	Feb. 24, 1917	1	33	1	20	....	....

Howells	Miss Nellie Tuthill	Feb.	22, 1917	1	35	2	34	....	....
Pine Bush	Mrs. W. H. Burger	Feb.	23, 1917	1	41	2	28	....	....
Unionville	Mrs. M. B. Stoll	Feb.	26, 1917	1	43	1	49	....	....
Walden	Mrs. J. W. Crowell	Feb.	27, 1917	1	14	1	7	....	....
ORLEANS:				6	200	5	64	....	....
East Shelby	Mrs. B. C Roberts, R. D. 6, Medina	Feb.	27, 1917	1	36	1	12	....	....
Kendall	Mrs. Anna Burke	Feb.	16, 1917	1	27	1	7	....	....
Knowlesville	Mrs. Carrie Whiting, R. D. 6, Albion	Mar.	1, 1917	1	44	1	12	....	....
Medina	Mrs. W. J. Balch	Feb.	26, 1917	2	60	....	......	....	....
Waterport	Mrs. Ray Fuller	Feb.	22, 1917	1	33	2	33	....	....
OSWEGO:				13	480	22	364	....	....
Altmar	Miss Bertha Pratt, R. D. 1, Altmar	Jan.	31, 1917	1	30	1	20	....	....
Amboy Center	Mrs. Fred Jamieson, R. D., Williamstown	Feb.	1, 1917	1	29	2	31	....	....
Bernhards Bay	Mrs. H. E. Myers	Feb.	13, 1917	1	21	2	44	....	....
Central Square	Mrs. Chas. B. Allen, R. D. 1, Central Square	Feb.	12, 1917	1	71	2	63	....	....
Hannibal	Mrs. E. L. Gardenier	Feb.	7, 1917	1	70	....	......	....	....
Hastings	Mrs. James Wadsworth	Feb.	15, 1917	1	18	2	26	....	....
Lacona	Mrs. M. J. Upton, R. D., Sandy Creek	Jan.	30, 1917	1	40	2	24	....	....
Mount Pleasant	Mrs. Mabel Parker, R. D. 3, Fulton	Feb.	19, 1917	1	38	2	40	....	....
Palermo	Mrs. Beatrice Jennings, R. D. 4, Fulton	Feb.	20, 1917	1	36	2	20	....	....
Parish	Mrs. Ida Edick	Feb.	16, 1917	1	63	2	26	....	....
Pennellville	Mrs. Nellie B. Morgan, R. D. 2, Phoenix	Feb.	14, 1917	1	22	2	25	....	....
Pulaski	Miss G. Gates	Feb.	17, 1917	1	28	2	37	....	....
Williamstown	Mrs. E. N. Harris, R. D., Williamstown	Feb.	2, 1917	1	14	1	8	....	....
OTSEGO				9	345	1	45	....	....
Edmeston	Miss Vivian Ritter	Jan.	23, 1917	1	45	1	45	....	....
Elk Creek	Miss Janella Cole	Dec.	22, 1916	1	14	....	......	....	....
Fly Creek	Miss Harriette Taylor	Dec.	20, 1916	1	32	....	......	....	....
Garrettsville	Mrs. W. J. Smith	Dec.	19, 1916	1	21	....	......	....	....
Gilbertsville	Mrs. Mabel Tice	Jan.	26, 1917	1	75	....	......	....	....
Mount Vision	Mrs. John Rounds	Dec.	27, 1916	1	34	....	......	....	....

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
OTSEGO — (*Continued*)								
West Laurens	Mrs. Fred Dyer	Dec. 28, 1916	1	22	....	......	....	....
Westville	Mrs. Karl Green, R. D., Schenevus	Dec. 21, 1916	1	42	....	......	....	....
Worcester	Miss Lillian Waterman	Dec. 29, 1916	1	60	....	......	....	....
PUTNAM:			3	105	6	129	....	....
Adams Corners	Mrs. Edward J. Horton	Feb. 14, 1917	1	47	2	56	....	....
Mahopac	Miss Mary A. Crane, R. D., Carmel	Feb. 15, 1917	1	14	2	13	....	....
Patterson	Mrs. E. A. Ives	Feb. 16, 1917	1	44	2	60	....	....
RENSSELAER:			6	161	13	251	....	....
East Greenbush	Mrs. Frank Van A. Miller, R. D. 2, East Greenbush	Jan. 29, 1917	1	28	1	25	....	....
East Poestenkill	Mrs. O. Devernoe	Jan. 26, 1917	1	10	2	18	....	....
Johnsonville	Mrs. William Cottrell	Jan. 15, 1917	1	23	2	34	....	....
Melrose	Mrs. H. C. Campbell, North Troy	Jan. 24, 1917	1	36	3	74	....	....
Raymertown	Miss Nellie Sherman, Melrose	Jan. 25, 1917	1	52	2	72	....	....
Wynantskill	Mrs. Frank Wicks, R. D. 2, Wynantskill	Jan. 27, 1917	1	12	3	28	....	....

ROCKLAND:									
Tallmans	Mrs. T. Springsteen	Feb.	20-21, 1917	1	36	4	68	....	....
ST. LAWRENCE:				13	586	13	391	....	....
Crary Mills	Mrs. Roy Brown, Pierrepont	Jan.	13, 1917	1	42	1	41	....	....
De Kalb Junction	Mrs. Earl Akley	Jan.	11, 1917	1	32	1	19	....	....
DePeyster	Mrs. H. G. Turner, Heuvelton	Jan.	15, 1917	1	54	....	......	....	....
Edwards	....	Oct.	14, 1916	....	......	....	......	1	31
Fine	Mrs. Chas. F. Chubb	Jan.	25, 1917	1	65	2	65	....	....
Gouverneur	Mrs. Henry Freeman	Jan.	17, 1917	1	36	1	15	....	....
Helena	Mrs. C. F. Prarie	Jan.	2, 1917	1	65	1	40	....	....
Lisbon	....	Oct.	12, 1916	....	......	....	......	1	37
Louisville	Miss Emilie O. Doud	Jan.	10, 1917	1	27	2	65	....	....
Madrid	....	Oct.	11, 1916	....	......	....	......	1	35
Madrid	Mrs. Herbert E. Sweet	Jan.	8, 1917	1	23	1	13	....	....
Nicholville	Miss Clara Smith	Jan.	4, 1917	1	35	1	50	....	....
Richville	Miss M. Etta Barber	Jan.	16, 1917	1	40	1	43	....	....
Russell	Mrs. G. A. Brown	Jan.	12, 1917	1	21	....	......	....	....
Waddington	Mrs. Maurice Elliott	Jan.	9, 1917	1	14	1	30	....	....
Winthrop	Mrs. D. Jennings	Jan.	6, 1917	1	132	1	10	....	....
SARATOGA:				6	175	11	171	....	....
Ballston Center	....	April	17, 1917	....	......	....	......	1	38
Burnt Hills	....	April	20, 1917	....	......	....	......	2	69
Charlton	Mrs. Burt Conde, Schenectady, R. D. 2	Jan.	10, 1917	1	39	2	23	....	....
Charlton	....	April	19, 1917	....	......	....	......	2	156
East Galway	Mrs. Arthur Welsh	Jan.	11, 1917	1	29	2	42	....	....
Gansevoort	Mrs. George B. Eddy	Dec.	4, 1916	1	21	1	20	....	....
Greenfield Center	Mrs. Alice Parmelee	Jan.	12, 1917	1	35	2	35	....	....
Maltaville	Mrs. Freeman Cooper, R. D. 3, Mechanicville	Jan.	22, 1917	1	13	2	19	....	....
Saratoga Springs	....	April	18, 1917	....	......	....	......	1	30
Wilton	Miss Helen Smith, R. D. 2, Saratoga Springs	Jan.	13, 1917	1	38	2	32	....	....

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of ses sions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
SCHENECTADY:			3	103	4	102	....	....
Braman Corners........	Mrs. Chas. M. Howe, Amsterdam, R. D. 1	Dec. 15, 1916	1	37	1	27	....	....
Glenville..............	Mrs. DeGraff VanVranken, Schenectady, R. D. 8..........................	Jan. 9, 1917	1	40	3	75	....	....
Quaker Street..........	Mrs. Wilson Briggs..................	Dec. 16, 1916	1	26	....	......	....	....
SCHOHARIE:			6	186	8	129	....	....
Breakabeen............	Mrs. Phillip Bergh....................	Dec. 19, 1916	1	35	2	47	....	....
Gilboa................	Mrs. Matie Lewis, Gilboa, R. D. 1......	Dec. 27, 1916	1	25	1	18	....	....
Jefferson.............	Mrs. J. H. Hartwell....................	Dec. 16, 1916	1	22	....	......	....	....
Schoharie.............	Mrs. Perry E. Taylor..................	Dec. 18, 1916	1	12	2	10	....	....
Sharon Springs.........	Mrs. Geo. A. Stringer..................	Dec. 21, 1916	1	41	1	14	....	....
Sloansville	Mrs. R. V. Cox........................	Dec. 20, 1916	1	51	2	40	....	....
SCHUYLER:			5	211	9	192	....	....
Catherine.............	Mrs. E. B. Winton, Montour Falls......	Mar. 10, 1917	1	58	2	40	....	....
Mecklenburg...........	Mrs. W. A. Culver, Trumansburg........	Mar. 9, 1917	1	45	1	17	....	....

Moreland	Mrs. Byron Rhodes, Moreland Station	Mar.	8, 1917	1	20	2	20	....	....
Reading Center	Mrs. W. J. Jennings, Watkins, R. D. 1	Mar.	7, 1917	1	43	2	59	....	....
Tyrone	Mrs. C. Cole, Watkins, R. D	Mar.	6, 1917	1	45	2	56	....	....
SENECA:				3	77	7	53	....	....
Covert	Mrs. Selina Pearsall, Trumansburg	Feb.	1, 1917	1	36	2	35	....	....
Romulus	Mrs. Arthur Smith	Feb.	2, 1917	1	33	2	5	....	....
Seneca Falls	Mrs. Fred I. Long, 130 State St., Seneca Falls	Feb.	3, 1917	1	8	3	13	....	....
STEUBEN:				9	480	13	432	....	....
Atlanta	Mrs. C. G. Gray, North Cohocton	Feb.	12, 1917	1	15	1	6	....	....
Bath	Mrs. James Little, Bath, R. D. 1	Feb.	16–17, 1917	1	54	4	73	....	....
Campbell	Mrs. John S. Curtis, Curtis	Feb.	20, 1917	1	40	2	53	....	....
Caton	Mrs. L. R. Tubbs, Seeley Creek, R. D. 1	Feb.	8, 1917	1	45	2	36	....	....
Cohocton	Mrs. Chas. Haight	Feb	9, 1917	1	50	2	30	....	....
Greenwood	Mrs. Knox Miller, Andover, R. D	Feb.	6, 1917	....	......	....	......	....	....
Ingleside	Mrs. C. P. Stanton, R. D. 1, Cohocton	Feb.	15, 1917	1	90	2	107	....	....
North Urbana	Mrs. J. F. Barclay, Hammondsport	Feb.	19, 1917	1	41	2	53	....	....
Prattsburg	Mrs. F. H. Lewis	Feb.	10, 1917	1	40	1	12	....	....
Stephens Mills	Mrs. C. C. Zimmerman, Arkport, R. D. 3	Feb.	3, 1917	....	......	....	......	....	....
Troupsburg	Miss Mary Gunn	Feb.	7, 1917	1	105	2	62	....	....
SUFFOLK:				4	113	9	170	....	....
Bridgehampton	Miss Antoinette White, Sagaponack	Jan.	19–20, 1917	1	35	4	83	....	....
Brookhaven	....	Aug.	15–17, 1917	....	......	....	......	3	120
Mattituck	Mrs. H. J. Reeve	Jan.	22–23, 1917	1	52	2	56	....	....
Port Jefferson Station	Mrs. Edward F. Kinsey, Terryville	Jan.	17, 1917	1	14	2	18	....	....
Yaphank	Mrs. August VonHassel	Jan.	18, 1917	1	12	1	13	....	....
SULLIVAN:				6	316	6	116	....	....
Bethel	Miss Elizabeth Knapp	Dec.	8, 1916	1	35	1	1	....	....
Grahamsville	Miss Emily C. Brooks, Grahamsville, R. D. 1	Dec.	4, 1916	1	68	2	81	....	....
Hortonville	Mrs. F. Hess, Callicoon	Dec.	6, 1916	1	64	1	6	....	....
Lake Huntington	Mrs. C. B. Glover	Dec.	7, 1916	1	44	....	......	....	....

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Continued*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE	SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
			No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
SULLIVAN — (*Continued*)								
Monticello	Mrs. Ervin Mapes	Dec. 9, 1916	1	24	2	28	....	....
Youngsville	Mrs. Wm. Breimer, Youngstown Manor, R. D. 1	Dec. 5, 1916	1	81	....	......	....	....
TIOGA:			6	346	13	194	....	....
Apalachin	Mrs. S. H. Oran	Feb. 5, 1917	1	26	2	22	....	....
Berkshire	Mrs. L. L. Lockwood	Feb. 28, 1917	1	65	2	27	....	....
Glencairn	Mrs. Walter Wheeler, Waverly, R. D.	Feb. 23, 1917	1	30	2	31	....	......
Nichols	Mrs. Ward Sherwood	Feb. 26, 1917	1	80	1	10	....	....
Owego	Mrs. Geo. T. Bodle	Feb. 27, 1917	1	45	3	19	....	....
Waverly	Mrs. Harry C. Baldwin, 472 Pennsylvania Ave., Waverly	Feb. 24, 1917	1	100	3	85	....	....
TOMPKINS:			4	173	9	178	....	....
Danby	Mrs. W. E. Logan, R. D. 24, Brookton	Jan. 30, 1917	1	33	3	39	....	....
Enfield Center	Mrs. Charles Jones, R. D. 5, Ithaca	Jan. 31, 1917	1	35	2	37	....	....
McLean	Mrs. Flora L. Howard	Mar. 2, 1917	1	66	2	63	....	....
South Lansing	Miss Emma Kurttles	Jan. 29, 1917	1	39	2	39	....	....
West Groton	Mrs. W. H. Bulkley, Groton	Mar. 15, 1917	....	......	....	......	....	....

ULSTER:				6	158	12	151	....	....
Bruynswick	Mrs. D. G. Crowell, R. D., Wallkill	Feb.	28, 1917	1	26	2	23	....	....
Clintondale	Mrs. Graham Herd	Mar.	5, 1917	1	17	2	14	....	....
Mt. Marion	Mrs. H. Clinton Finger	Mar.	8, 1917	1	22	2	27	....	....
Plattekill	Miss Tillie Nabor, R. D. 2, Gardiner	Mar.	1, 1917	1	43	2	42	....	....
Stone Ridge	Mrs. Oscar Hornbeck	Mar.	7, 1917	1	31	2	30	....	....
Ulster Park	Mrs. Edith A. Storey	Mar.	6, 1917	1	19	2	15	....	....
WARREN:				3	55	5	64	....	....
Hague	Miss E. B. Alden	Oct.	11, 1916	1	22	2	31	....	....
Queensbury	Mrs. Benj. J. Odell, R. D. 1, Glens Falls	Oct.	12, 1916	1	26	2	31	....	....
Warrensburg	Mrs. Clarence Brown, Athol	Oct.	13, 1916	1	7	1	2	....	....
WASHINGTON:				7	356	12	212	....	....
Cambridge	Mrs. George Potter	Jan.	16, 1917	1	58	2	23	....	....
Easton	Mrs. Jacob F. Pratt, R. D. 1, Schaghticoke	Jan.	23, 1917	1	52	2	36	....	....
Fort Miller	Miss Katherine DeGroot, R. D. 1, Fort Edward	Jan.	20, 1917	1	25	1	41	....	....
Hartford	Mrs. Julia Norton	Jan.	19, 1917	1	54	2	52	....	....
Putnam	Mrs. G. E. Dedrick, Putnam Station	Dec.	5, 1916	1	15	2	35	....	....
Salem	Mrs. J. W. Johnson	Jan.	17, 1917	1	102	2	21	....	....
West Hebron	Mrs. Joseph McElroy, R. D., Salem	Jan.	18, 1917	1	50	1	4	....	....
WAYNE:				8	362	11	197	....	....
Alton	Mrs. Emily Thompson	Feb.	8, 1917	1	50	....	......	....	....
Clyde	Mrs. William A. Syron	Mar.	10, 1917	1	110	2	68	....	....
Lincoln	Mrs. Z. E. Braithwaite	Feb.	13, 1917	1	28	3	37	....	....
Macedon Center	Mrs. Clara Barker, Macedon	Mar.	8, 1917	1	54	2	55	....	....
Marion	Mrs. Arthur Besemer	Mar.	9, 1917	1	29	....	......	....	....
Ontario	Mrs. Frank Brown, R. D. 5, Ontario	Feb.	14, 1917	1	40	1	2	....	....
South Butler	Mrs. Perry Fry	Mar.	12, 1917	1	34	2	27	....	....
Williamson	Miss Lulu Austin	Feb.	12, 1917	1	17	1	8	....	....
WESTCHESTER:				1	26	2	20	....	....
Cortland Grange	Mrs. F. Byron Travis, Peekskill	Feb.	19, 1917	1	26	2	20	....	....

TABLE SHOWING RECORD OF SPECIAL WOMEN'S SESSIONS, AND REGULAR INSTITUTE SESSIONS AND SPECIAL MEETINGS ADDRESSED BY WOMEN INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE — (*Concluded*)

COUNTY AND PLACE	LADY CORRESPONDENT	DATE		SPECIAL WOMEN'S SESSIONS		REGULAR INSTITUTE SESSIONS, MIXED AUDIENCES		SPECIAL MEETINGS	
				No. of sessions	Total attendance	No. of sessions	Total attendance	No. of sessions	Total attendance
WYOMING:				7	242	4	130	....	....
Castile	Mrs. J. L. Fuller, Jr	Jan.	27, 1917	1	27	....	......	....	....
Cowlesville	Mrs. R. J. Patch	Dec.	6, 1916	1	30	1	36	....	....
Currier's Grange*	Mrs. C. A. Woolley, Java	Jan.	2-3-4, 1917	2	106	3	94	....	....
Java Village	Mrs. Mary E. Nichols	Jan.	18, 1917	1	22	....	......	....	....
Pike	Mrs. J. Stoutenburg	Jan.	26, 1917	1	12	....	......	....	....
Warsaw	Mrs. Clarence Smallwood	Jan.	29, 1917	1	45	....	......	....	....
YATES:				4	131	8	151	....	....
Bellona	Mrs. Schuyler Lott	Mar.	2, 1917	1	29	2	26	....	....
Benton Center	Mrs. Marie Gardner, R. D. 9, Penn Yan	Mar.	3, 1917	1	27	2	23	....	....
Lakemont	Mrs. A. H. Clapper	Mar.	5, 1917	1	20	2	20	....	....
Middlesex	Mrs. Herbert Foster, Rushville	Feb.	28, 1917	1	55	2	82	....	....
				358	13,217	522	9,458	....	....

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* Local people contributed $40 for extra two days.

NUMBER OF DAYS' INSTITUTE WORK IN EACH COUNTY

COUNTY	DAYS	COUNTY	DAYS
Regular Institutes		*Regular Institutes*	
Albany	5	**Ontario**	8
Allegany	8	**Orange**	7
Broome	6	**Orleans**	5
Cattaraugus	8	**Oswego**	13
Cayuga	8	**Otsego**	9
Chautauqua	12	**Putnam**	3
Chemung	5	**Rensselaer**	6
Chenango	7	**Rockland**	2
Clinton	6	**St. Lawrence**	13
Columbia	5	**Saratoga**	6
Cortland	7	**Schenectady**	3
Delaware	7	**Schoharie**	6
Dutchess	7	**Schuyler**	5
Erie	9	**Seneca**	3
Essex	6	**Steuben**	12
Franklin	6	**Suffolk**	6
Fulton	2	**Sullivan**	6
Genesee	8	**Tioga**	6
Greene	5	**Tompkins**	5
Herkimer	5	**Ulster**	6
Jefferson	10	**Warren**	3
Lewis	5	**Washington**	7
Livingston	7	**Wayne**	8
Madison	9	**Westchester**	2
Monroe	10	**Wyoming**	8
		Yates	4
Montgomery	6		
Nassau	2	**Total**	372
Niagara	8		
Oneida	11	*Farmers' Days*	
Onondaga	10	**Orleans**	3

RECAPITULATION FOR REGULAR INSTITUTES, FARMERS' DAYS, AND MISCELLANEOUS MEETINGS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE

	Number of meetings	Number of sessions	Total attendance	Average per session
Regular institutes	361	1,051	68,204	65
Farmers' days	1	8	1,820	227
Miscellaneous meetings	70	81	6,730	83

RECAPITULATION OF WOMEN'S WORK, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE

	Number of sessions	Total attendance
Special women's sessions.......................	358	13,217
Regular sessions, mixed audiences...............	522	9,458
Special meetings	22	1,031

STATE-WIDE COOPERATIVE MEETINGS

New York State Dairymen's Association
New York State Fruit Growers' Association
State College of Agriculture, Ithaca, Farmers' Week
State School of Agriculture, Alfred, Farmers' Week
State School of Agriculture, Morrisville, Farmers' Week
State School of Agriculture, Cobleskill, Farmers' Week

TESTIMONY AS TO THE VALUE OF THE INSTITUTE WORK

At this stage of the institutes, it is not necessary to sound the trumpet as to their worth. Nevertheless, the Director believes himself justified in placing in this report the voluntary testimony taken at random from some of the reports of the correspondents over the state during the past season. Had he gone back for a longer term, a well-sized volume could have been filled. Nothing has been published which was not definite and specific. Had there been added more general appreciation of the work and workers, the list again would have been too extensive for publication.

The reason for setting forth this testimony is this: The institutes are now over a generation old; the coming season marks thirty years of the Director's connection with them. As with all established institutions their day of novelty and hence their conspicuous position has long passed. In the early days of the institutes, one of our leading agricultural papers published each week detailed accounts of addresses and discussions. Few papers now give much space to the doings of the institutes. Yet, with all appreciation of the matter put forth in those early days of crudity, and paucity of agricultural knowledge, there is more direct, correct, definite information given in one present-day institute than was often found in a whole week thirty years ago.

It is the way of the world that the new — often untried — is in the limelight. Farm bureaus, extension schools, food commissions — all excellent in their way — are occupying the center of the stage. Therefore, men not always well informed are led to ask, "Is there any place for the farmers' institute?" And, in consequence of this idea, it has been often difficult to secure adequate appropriations.

The fact that we have, as shown on page 136, held 40 meetings in places never having had anything of the kind before and in 148 places away from the railroad indicates that there is a large field which the institutes are particularly fitted to fill and that such work is vitally necessary to the advancement of agriculture over the state.

In this connection it is well to emphasize that holding meetings is only one phase of the work of the bureau, as this report indicates.

COMMENTS ON INSTITUTES BY LOCAL CORRESPONDENTS

"Some years ago a boy just out of high school attended an institute. It made him realize that there were many things that his father and neighbors did not know and led him to take an agricultural course at Cornell."

Berkshire, Tioga County.

"Farmers who seemed to be in a dead rut, are waking up to the fact that they must be up and doing if they wish to make the farm pay. All in this vicinity are talking about the institutes and seem to be determined to take more interest than ever before."

Lincolndale, Westchester County.

"The institutes are a benefit to all directly or indirectly, in that they crystalize ideas that have been picked up in papers or bulletins into action."

Webster, Monroe County.

"One man remarked that he could learn more at the institute in a half-hour than he could by staying at home all his life."

Treadwell, Delaware County.

"The institutes have started men keeping daily milk records, studying the mixing of rations. They stimulate the extension service of the agricultural college and the high school."

Greigsville, Livingston County.

"Before we had institutes scarcely any one could get a stand of clover. Now nearly everyone can, with lime. In my opinion they have saved us hundreds of dollars by not using potash. I am convinced that phosphoric acid and lime are all we need."

Ingleside, Steuben County.

"There has been a marked change in the care of orchards and the choosing of grain and potatoes for seed."

Gates, Monroe County.

"The institutes have shown the people that it pays to study the soil, keep records of individual cows, spray potatoes and apple trees; they have also taught the valuable use of lime."

Paris Hill, Oneida County.

"The institutes have promoted intelligent spraying and a wise use of farm and chemical fertilizers."

Reed Corners, Ontario County.

"Interest in farm life is greater since the coming of the institutes. Better crops are grown. Dairy work particularly has been improved."

Bridgehampton, Suffolk County.

"The institutes have increased egg production very much and opened the eyes of the farmers as to better cultivation and the application of lime. Several carloads have been used during the past year and there have been great results from it."

Prattsburg, Steuben County.

"After hearing an institute lecture on dairying, a farmer in this neighborhood began to test his cows. He sold the robbers and received as much milk from one-half the new ones at less cost."

Geneseo, Livingston County.

"The institutes have encouraged the better care of stock, also better tillage of the soil. They have given a better insight into the building up of the soil, and we get better results."

Smyrna, Chenango County.

"The institutes have been of value to us. The farmers are treating oats and potatoes for disease. They are also testing cows and getting rid of the boarders."

Sennett, Cayuga County.

"The first silo was built here after hearing a talk at an institute."

Wadhams, Essex County.

"Better farming is being carried on here and there is better care of crops. Rotations are more uniform and more silos are being erected."

West Chazy, Clinton County.

"There were no silos here until we had institutes. Now there is one on nearly every farm. No alfalfa was raised before we had institutes. Now there are several acres on some farms."

Elkdale, Cattaraugus County.

"As a result of institutes, cement construction is being taken up. Much interest is being expressed in sanitary and house and farm improvements. Some are installing hot water systems and indoor toilets, both flush and chemical."

Brookfield, Madison County

LIST OF FARMERS' INSTITUTE WORKERS, JULY 1, 1916, TO JUNE 30, 1917, INCLUSIVE

DIRECTOR OF FARMERS' INSTITUTES

Edward van Alstyne

In Charge of Meetings

Dr. M. Hamilton,
Roy P. McPherson,
A. J. Nicoll,
C. R. White,
D. P. Witter,
Jared Van Wagenen, jr

REGULAR LECTURERS WITH DATES OF SERVICE

Bonsteel, F. E., Ashville	Dec. 4-22; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Cook, I. C. H., South Byron	Dec. 4-22, 27-29; Jan. 2-31; Feb. 1-10, 17, 26-28; Mar. 1-15.
Hamilton, Dr. M., Delhi	Dec. 4-22, 27-29; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Harrington, Mrs. Ida S., Albany	Oct. 10-13; Dec. 4-22; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Heaton, Dr. Lucia E., Canton	Jan. 2-6, 15-31; Feb. 1-28; Mar. 1-15.
Hotaling, William, Kinderhook	Dec. 4-22; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Jones, Mrs. Della A., Worcester	Dec. 4-22; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Jones, Miss Jennie C., Paris	Dec. 4-22, 27-29; Jan. 2-6; Mar. 12-15.
McPherson, Roy P., Le Roy	Dec. 4-22; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Minns, E. R., Ithaca	Dec. 4-22, 27-29; Jan. 2-6, 15-23, 29-31; Feb. 1-24; Mar. 5-15.
Monroe, Mrs. Mary T., Dryden	Dec. 4-22, 27-29; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Nicoll, A. J., Delhi	Dec. 4-22, 27-29; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Phelps, Mrs. Orra P., Saratoga Springs	Dec. 4-22; Jan. 8-31; Feb. 1-10, 21; Mar. 15.
Santee, Dr. E. M., Cortland	Dec. 4-22; Jan. 5-31; Feb. 1-28; Mar. 1-15.
Van Wagenen, Jared, jr., Lawyersville	Dec. 19, 27-29; Jan. 2-6, 15-23; 29-31; Feb. 1-10; Mar. 12-15.
White, C. R., Ionia	Oct. 10-13; Dec. 4-22; Jan. 2-31; Feb. 1-28; Mar. 1-15.
Witter, D. P., Berkshire	Dec. 4-22, 27-29; Jan. 24.

LECTURERS FROM STATE DEPARTMENT OF AGRICULTURE

A. B. Buchholz, Nursery Inspector, Albion, N. Y.
L. F. Strickland, Nursery Inspector, Lockport, N. Y.
Hon. Chas. S. Wilson, Commissioner of Agriculture, Albany, N. Y

LECTURERS FROM STATE COLLEGE OF AGRICULTURE

M. F. Barrus, Extension Professor of Plant Pathology, Ithaca, N. Y.
H. C. Botsford, Assistant in Poultry Husbandry, Ithaca, N. Y.
George W. Cavanaugh, Professor of Chemistry in its Relations to Agriculture, Ithaca, N. Y.
D. J. Crosby, Professor of Extension Teaching, Ithaca, N. Y.
E. O. Fippin, Professor of Soil Technology, Ithaca, N. Y.
R. J. Haskell, Instructor in Plant Pathology, Ithaca, N. Y.
W. G. Krum, Assistant and Superintendent in Poultry Husbandry, Ithaca, N. Y.

Robert Matheson, Assistant Professor of Economic Entomology, Ithaca, N. Y.
R. W. Rees, Extension Professor of Pomology, Ithaca, N. Y.
B. B. Robb, Assistant Professor of Rural Engineering, Ithaca, N. Y.
A. E. Wilkinson, Extension Instructor in Vegetable Gardening, Ithaca, N. Y.
Paul Work, Superintendent and Instructor in Vegetable Gardening, Ithaca, N. Y.

LECTURERS FROM NEW YORK AGRICULTURAL EXPERIMENT STATION

F. Z. Hartzell, Associate Horticulturist, Fredonia, N. Y.
F. C. Stewart, Botanist, Geneva, N. Y.

LECTURERS FROM STATE SCHOOLS OF AGRICULTURE

J. R. Dice, State School of Agriculture, Morrisville.
F. G. Helyar, Director, State School of Agriculture, Morrisville.
H. B. Knapp, Director, State School of Agriculture, Cobleskill.
W. C. Sanctuary, State School of Agriculture, Morrisville.

LECTURERS FROM STATE EDUCATION DEPARTMENT

Dr. E. P. Felt, State Entomologist, Albany, N. Y.

LECTURERS FROM STATE HEALTH DEPARTMENT

Dr. L. L. Parker, Albany, N. Y.
Dr. Chas. S. Prest, Sanitary Supervisor, Waterford, N. Y.

SPECIAL LECTURERS

B. J. Case, Sodus, N. Y.
H. E. Cox, West Rush, N. Y.
Dr. J. F. Devine, Goshen, N. Y.
John A. Ennis, Pattersonville, N. Y.
Samuel Fraser, Geneseo, N. Y.
Mrs. Katherine Hamilton, Delhi, N. Y.
George W. Harris, Baldwinsville, N. Y.
Rev. T. M. Morrison, Bellona, N. Y.
F. A. Sirrine, Riverhead, L. I.
E. R. Smith, Kasoag, N. Y.

FARMERS' DAYS

The only meeting of this character was at Albion, Orleans County. As indicated by the figures given, the attendance was much in advance of a year ago.

COUNTY AND PLACE	CORRESPONDENT	DATE	NUMBER SESSIONS	ATTENDANCE	AVERAGE PER SESSION
Orleans, Albion.....	John Bidleman...	Feb. 13–15	8	1,820	228

The program following shows that the plan followed for the past years of giving one day to soil and allied topics, one to crops and stock, and one to horticulture was agreeable. Two separate poultry sessions were held, as well as two for women in charge of Mrs. Ida S. Harrington. A request was made that next year there should be two days devoted to the women's work.

A notable feature of the meeting was the presence of Governor Charles S. Whitman. This is the first time in the history of the state that a governor has attended a farmers' institute. Most pleasing is the fact that the Governor did not come at the invitation of the Director but because of his desire to meet such a representation of New York State farmers as he had been told were always to be found at Albion. After the Governor had finished his address, he held an informal reception, and expressed his appreciation of the character of his audience and the courtesy with which he had been received.

PROGRAM

ALBION, ORLEANS COUNTY

March 13, 1917

Court House

FERTILITY DAY

A. M.

PRAYER, Rev. E. P. Woods.
ADDRESS OF WELCOME, A. B. Buchholz.
RESPONSE, Mr. Van Wagenen.
HOW PLANTS FEED, Prof. Cavanaugh.
DISCUSSION.
IMPORTANCE AND METHODS OF TILLAGE, Mr. Van Wagenen.
DISCUSSION.

P. M.

ROUND TABLE.
EXPERIENCE WITH POWER MACHINES IN DRAINAGE, Professor Robb.
DISCUSSION.
THE MOST ECONOMICAL FORMS OF COMMERCIAL PLANT FOOD FOR THE COMING SEASON, Professor Cavanaugh.
DISCUSSION.
ECONOMICAL METHODS OF FARM WATER SUPPLY, Professor Crosby.
DISCUSSION.
THE ACTIVITIES OF A FARM BUREAU MANAGER (illustrated by stereopticon), Mr. Minns.
RURAL SCHOOLS, Mr. Van Wagenen.

March 14, 1917

Court House

LIVE STOCK AND FARM CROP DAY

A. M.

SUMMER DISEASES OF SHEEP AND LAMBS, Dr. Hamilton.
DISCUSSION.
REVIVAL OF THE SHEEP INDUSTRY, Director van Alstyne.
DISCUSSION.
PROFITABLE PORK PRODUCTION, Dr. Hamilton.
DISCUSSION.

P. M.

ROUND TABLE.
CABBAGE AND OTHER MUCK LAND CROPS, Professor Work.
DISCUSSION.
FAILURES AND SUCCESSES WITH ALFALFA, Director van Alstyne.
DISCUSSION.
THE POTATO CROP, Mr. Smith.
DISCUSSION.
THE RURAL CHURCH, Rev. T. M. Morrison.
THE REFINING INFLUENCES OF SONG, Mrs. Morgan.

March 14, 1917

Sunday School Room, Presbyterian Church

SPECIAL POULTRY SESSIONS

In Charge of W. G. Krum, Ithaca

A. M.

OPENING REMARKS, Mr. Krum.
REARING THE YOUNG STOCK, Mr. Botsford.
DISCUSSION.
PROFITABLE PRODUCTION OF POULTRY PRODUCTS, Mr. Krum.
DISCUSSION.

P. M.

SELECTION OF THE BREEDERS, Mr. Botsford.
DISCUSSION.
THE POULTRY BUSINESS — THE RIGHT AND THE WRONG WAY, Mr. Krum.
DISCUSSION.

March 15, 1917

Court House

HORTICULTURAL DAY

A. M.

DISEASES OF BEANS AND MUCK CROPS, Professor Barrus.
DISCUSSION.
IMPORTANCE OF HUMUS AND COVER CROPS, Director Van Alstyne.
DISCUSSION.
DISEASES OF FRUIT TREES AND THEIR CONTROL, Professor Barrus.
DISCUSSION.

P. M.

ROUND TABLE.
CONTROL OF INJURIOUS INSECTS, Professor Matheson.
DISCUSSION.
SPECIAL PROBLEMS OF THE APPLE GROWER, Professor Rees.
DISCUSSION.
IMPORTANT FACTORS AFFECTING THE FRUIT SITUATION, Commissioner Wilson.
DISCUSSION.
CLOSING WORDS.

March 15, 1917

Sunday School Room, Presbyterian Church

SPECIAL WOMEN'S SESSIONS

In Charge of Mrs. Ida S. Harrington

A. M.

OPENING REMARKS, Mrs. Harrington.
THE IMPORTANCE OF MILK IN THE DIET, Mrs. Harrington.
BUSINESS TRAINING FOR BOYS AND GIRLS, Mrs. Phelps.
DISCUSSION.

P. M.

QUESTION BOX, Conducted by Mrs. Phelps.
CO-OPERATIVE HOME-MAKING, Mrs. Harrington.
NATURE STUDY IN THE HOME, Mrs. Phelps.
DISCUSSION.
CLOSING WORDS, Mrs. Harrington.

SPECIAL LECTURES

As usual, these lectures have been given before granges, farmers' clubs, and various other local associations. They have been fewer in number than in previous years on account of lack of funds. In many cases we could have materially assisted the farm bureau managers, had there been funds to do so. As a rule, in no way do we get more close to the root of matters than by sending a speaker to take up some matter of particular local interest at the request of the community. Notably has this been true along the line of gardening with urban people; as well as lectures such as that on "Swine" by Mr. Harpending at Kinderhook, where there is a swine breeders' association.

WORK AMONG JEWISH FARMERS

As indicated, special attention was again shown to these people now on the land, whose knowledge of agriculture is exceedingly primitive, who do not readily affiliate with other farmers, and whose English is often so scanty that an interpreter is necessary.

The work in Sullivan and Ulster counties was carried on by Mr. E. R. Minns, assisted by Mr. Nathan Cohen as interpreter. The one meeting in Rensselaer County was chiefly a demonstration carried on by Mr. Wm. Hotaling, who had on other occasions met these people and gained their confidence. In many respects this is the most difficult work undertaken by the Bureau. So great is the need that it should be continued until some other more direct agency can be substituted.

WORK AMONG JEWISH FARMERS

COUNTY AND PLACE	DATE	SESSIONS	ATTENDANCE	LECTURER	SUBJECT
Sullivan:					
Centerville Station...	Mar. 7, 1917	1	30	E. R. Minns.... Samuel Hein....	General farming. Interpreting.
Fallsburg...........	Mar. 6, 1917	1	40	E. R. Minns.... Samuel Hein....	General farming. Interpreting.
Ferndale............	Mar. 5, 1917	1	30	E. R. Minns.... Samuel Hein....	General farming. Interpreting.
Mountaindale.......	Mar. 8, 1917	1	30	E. R. Minns.... Ely Greenblatt..	General farming. Interpreting.
Monticello..........	Mar. 8, 1917	1	24	E. R. Minns.... Ely Greenblatt..	General farming. Interpreting.
Ulster:					
Ellenville...........	Mar. 9, 1917	1	26	E. R. Minns.... W. H. Hook....	General farming. Interpreting.
Greenfield...........	Mar. 10, 1917	1	40	E. R. Minns.... Ely Greenblatt..	General farming. Interpreting.
Rensselaer:					
Nassau.............	April 20, 1917	1	80	Wm. Hotaling...	Horticulture, food conservation.

MISCELLANEOUS MEETINGS TO WHICH DEPARTMENT LECTURERS WERE SENT

COUNTY AND PLACE	DATE	SESSIONS	ATTENDANCE	LECTURER	SUBJECT
ALBANY:					
Albany	Oct. 9, 1916	1	15	Edward van Alstyne	Rural church
Albany	Jan. 24, 1917	1	45	D. P. Witter	General agriculture
Albany	Mar. 24, 1917	1	100	Mrs. Ida S. Harrington	Home topics
Altamont	Oct. 24, 1916	1	50	Mrs. Ida S. Harrington	Lowering cost of living
Altamont	April 10, 1917	1	51	Mrs. Della A. Jones	Home topics, sanitation
South Westerlo	June 30, 1917	1	100	Edward van Alstyne	Citizenship
				Jared Van Wagenen, jr	Rural improvement
BROOME:					
Binghamton	Dec. 8, 1916	2	175	Edward van Alstyne	Farm bureaus
Binghamton	Feb. 22-24 1917	3	150	Jared Van Wagenen, jr	General agriculture
CAYUGA:					
East Venice	Dec. 15, 1916	1	39	I. F. Rice	Poultry
CHAUTAUQUA:					
Fredonia	Jan. 20, 1917	1	140	Wm. Hotaling	Marketing
Silver Creek	Jan. 30, 1917	1	260	C. R. White	Cooperation
CLINTON:					
Plattsburg	Jan. 12, 1917	1	180	Jared Van Wagenen, jr	General agriculture.
COLUMBIA:					
Hudson	Mar. 20, 1917	1	68	Mrs. Ida S. Harrington	Home topics
Hudson	June 1, 1917	1	30	Edward van Alstyne	Food situation
Kinderhook	May 12, 1917	1	50	H. B. Harpending	Swine

MISCELLANEOUS MEETINGS TO WHICH DEPARTMENT LECTURERS WERE SENT — (*Continued*)

COUNTY AND PLACE	DATE	SESSIONS	ATTENDANCE	LECTURER	SUBJECT
CORTLAND:					
Cincinnatus	Mar. 17, 1917	2	540	Jared Van Wagenen, jr	General agriculture
DUTCHESS:					
Lake Hammersley	June 8, 1917	1	100	Jared Van Wagenen, jr	General agriculture
ESSEX:					
Crown Point	Dec. 19, 1916	1	70	D. P. Witter	Farm bureau matters
GREENE:					
Sylvan Park	Aug. 19, 1917	1	150	Jared Van Wagenen, jr	General agriculture
MONTGOMERY:					
Amsterdam	June 26, 1917	1	60	Mrs. Della A. Jones	Canning demonstration, conservation of food
Canajoharie	June 28, 1917	1	73	Mrs. Della A. Jones	Canning demonstration, conservation of food
Fonda	Dec. 19, 1916	1	186	Edward van Alstyne	Rural citizenship
Fonda	June 27, 1917	2	119	Mrs. Della A. Jones	Canning demonstration, conservation of food
Palatine Grange	June 28, 1917	1	51	Mrs. Della A. Jones	Canning demonstration, conservation of food.
St. Johnsville	June 29, 1917	2	110	Mrs. Della A. Jones	Canning demonstration, conservation of food

MISCELLANEOUS MEETINGS TO WHICH DEPARTMENT LECTURERS WERE SENT — (*Continued*)

COUNTY AND PLACE	DATE	SESSIONS	ATTENDANCE	LECTURER	SUBJECT
NEW YORK:					
Columbia University	Dec. 8, 1916	1	80	Jared Van Wagenen, jr.	Pro and con of farm life
Columbia University	Dec. 15, 1916	1	60	Edward van Alstyne	Farm labor problem
Columbia University	Jan. 5, 1917	1	55	Alva Agee	Marketing farm produce
Columbia University	Jan. 12, 1917	1	85	Commissioner Wilson	Practical orcharding
Columbia University	Jan. 19, 1917	1	95	E. R. Smith	Profitable potato growing
Columbia University	Jan. 26, 1917	1	85	Edward van Alstyne	Orcharding and mixed farming
Columbia University	Feb. 2, 1917	1	80	E. G. Montgomery	Production of timothy hay
Columbia University	Feb. 9, 1917	1	85	Geo. Cavanaugh	Maintaining soil fertility
Columbia University	Feb. 16, 1917	1	90	O. S. Morgan	Rotation of crops
Columbia University	Feb. 23, 1917	1	60	C. W. Larson	Costs and profits in dairying
Columbia University	Mar. 2, 1917	1	100	Miss Flora Rose	Value of milk as food
Columbia University	Mar. 9, 1917	1	80	W. G. Krum	Construction of modern poultry house
Columbia University	Mar. 16, 1917	1	80	L. M. Hurd	Selection and breeding of poultry
Columbia University	Mar. 23, 1917	1	60	Harry Harpending	Profitable swine production
Columbia University	Mar. 28, 1917	1	100	Daniel Dean	Potato culture
Columbia University	Mar. 30, 1917	1	45	A. R. Mann	Duty of the farmer to the community
OTSEGO:					
Oneonta	Mar. 22, 1917	1	600	Edward van Alstyne	General agriculture
				Commissioner Wilson	The department of agriculture
				Hon. Chas. S. Whitman	Constructive agricultural legislation
Worcester	Aug. 26, 1916	1	100	Mrs. Rose Morgan	Music

MISCELLANEOUS MEETINGS TO WHICH DEPARTMENT LECTURERS WERE SENT — (*Continued*)

COUNTY AND PLACE	DATE	SESSIONS	ATTENDANCE	LECTURER	SUBJECT
RENSSELAER:					
Center Brunswick	Dec. 28, 1916	1	48	Edward van Alstyne	Farm bureau
Nassau	April 20, 1916	1	80	William Hotaling	General agriculture and orcharding
Troy	Feb. 3, 1917	1	100	Edward van Alstyne	Farm bureau
ST. LAWRENCE:					
Edwards	Oct. 14, 1916	1	31	Mrs. Orra P. Phelps	Milk as a food (demonstration, milk and cheese dishes)
Lisbon	Oct. 12, 1916	1	37	Mrs. Orra P. Phelps	Milk as a food (demonstration, milk and cheese dishes)
Madrid	Oct. 11, 1916	1	35	Mrs. Orra P. Phelps	Milk as a food (demonstration, milk and cheese dishes)
SARATOGA:					
Ballston Center	April 17, 1917	1	38	Mrs. Orra P. Phelps	Demonstration, milk and cheese dishes
Ballston Spa	April 18, 1917	1	75	Mrs. Orra P. Phelps	Conservation of food
Burnt Hills	April 20, 1917	2	69	Mrs. Orra P. Phelps	Home topics, conservation of food
Charlton	Sept. 9, 1916	1	150	Edward van Alstyne	Rural citizenship
Charlton	Mar. 8, 1917	1	90	Jared VanWagenen, jr.	General agriculture
Charlton	April 19, 1917	2	156	Mrs. Orra P. Phelps	Conservation of food
Saratoga Springs	Jan. 27, 1917	2	80	Edward van Alstyne	Farm bureau
Saratoga Springs	April 14, 1917	1	50	Edward van Alstyne	Farm bureau
Saratoga Springs	April 17, 1917	1	275	Mrs. Orra P. Phelps	Conservation of food
Saratoga Springs	April 18, 1917	1	30	Mrs. Orra P. Phelps	Conservation of food
SCHENECTADY:					
Schenectady	Mar. 21, 1917	1	25	Mrs. Ida S. Harrington	Home topics
Scotia	April 5, 1917	1	49	William Hotaling	Gardening

MISCELLANEOUS MEETINGS TO WHICH DEPARTMENT LECTURERS WERE SENT — (*Concluded*)

COUNTY AND PLACE	DATE	SESSIONS	ATTENDANCE	LECTURER	SUBJECT
SCHOHARIE:					
Lawyersville	Dec. 6, 1916	1	120	Edward van Alstyne	The farmer and the church
SUFFOLK:					
Brookhaven	Aug. 15, 1916	3	120	Mrs. Ida S. Harrington	Demonstration, home canning of fruits
	16,				Demonstration, home canning of vegetables
	17,				Sociability a fine art
SULLIVAN:					
Centerville Station	Mar. 7, 1917	1	30	E. R. Minns	General farming
Fallsburg	Mar. 6, 1917	1	40	E. R. Minns	General farming
Ferndale	Mar. 5, 1917	1	30	E. R. Minns	General farming
Mountain Dale	Mar. 8, 1917	1	30	E. R. Minns	General farming
Monticello	Mar. 8, 1917	1	24	E. R. Minns	General farming
ULSTER:					
Ellenville	Mar. 9, 1917	1	26	E. R. Minns	General farming
Greenfield	Mar. 10, 1917	1	40	E. R. Minns	General farming
Total		81	6,730		

FOLLOW-UP WORK

There has been less of this than since it was first started — first, because none is done in the farm bureau counties except in cooperation with the farm bureau managers; second, because of lack of funds to cooperate or even to do much which was desirable in non-farm-bureau counties. Altogether, 84 farms have been visited, Mr. D. P. Witter personally having gone to 83. As always, this work has been greatly appreciated and of much value.

The organization of the farm bureau in Wayne County was largely due to an appreciation of the work done there by Mr. Witter. It is an interesting comment on the follow-up work carried on by the Bureau of Farmers' Institutes that its effectiveness has been the cause of its reduction, for this work was the forerunner of the farm bureau, and the rapid and satisfactory growth of the farm bureaus in this state with a resident manager was largely due to the pattern set by the transient men from the institute staff.

DAIRY IMPROVEMENT ASSOCIATIONS

The change of title from "cow-testing associations," as forecast in my last report, will indicate the advance made in the work. It has taken on a new dignity as well as a new activity.

The register of honor shows that during the year we have had 200 cows on such test. Of these, 14 have completed the year's record. The fact that the highest reached 10,292 pounds of milk and 417 pounds of fat and the lowest 6,893 pounds of milk and 253 pounds of fat shows the advance that has been made along dairy lines in the state, as well as its possibilities. These are incentives to the dairyman, and he is no longer satisfied with the day of small things.

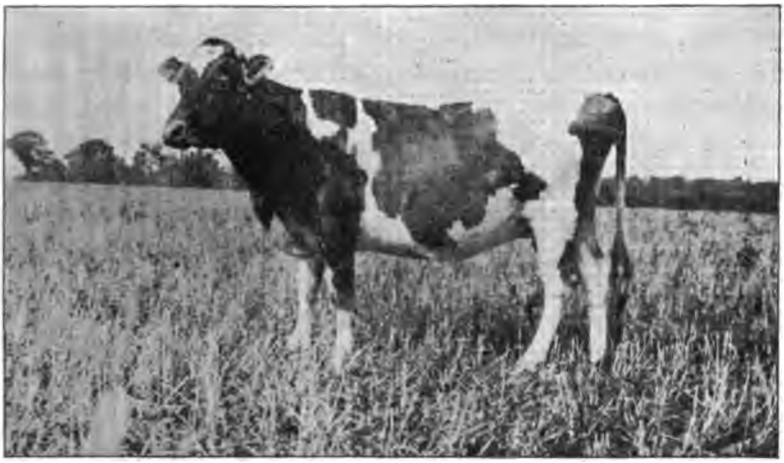

FIG. 2.— ONE OF THE COWS IN THE REGISTER-OF-HONOR TEST — QUEEN OF LAKE VIEW* — OWNED BY FRED BENEDICT, BLISS, N. Y.

These cows have not been forced or pampered, but have made their records under ordinary farm conditions. The records have been most carefully supervised and safeguarded. In fact, in a few cases, it has been necessary to throw out some records — not because of dishonesty on the part of anyone, but because of failure to comply with established standards.

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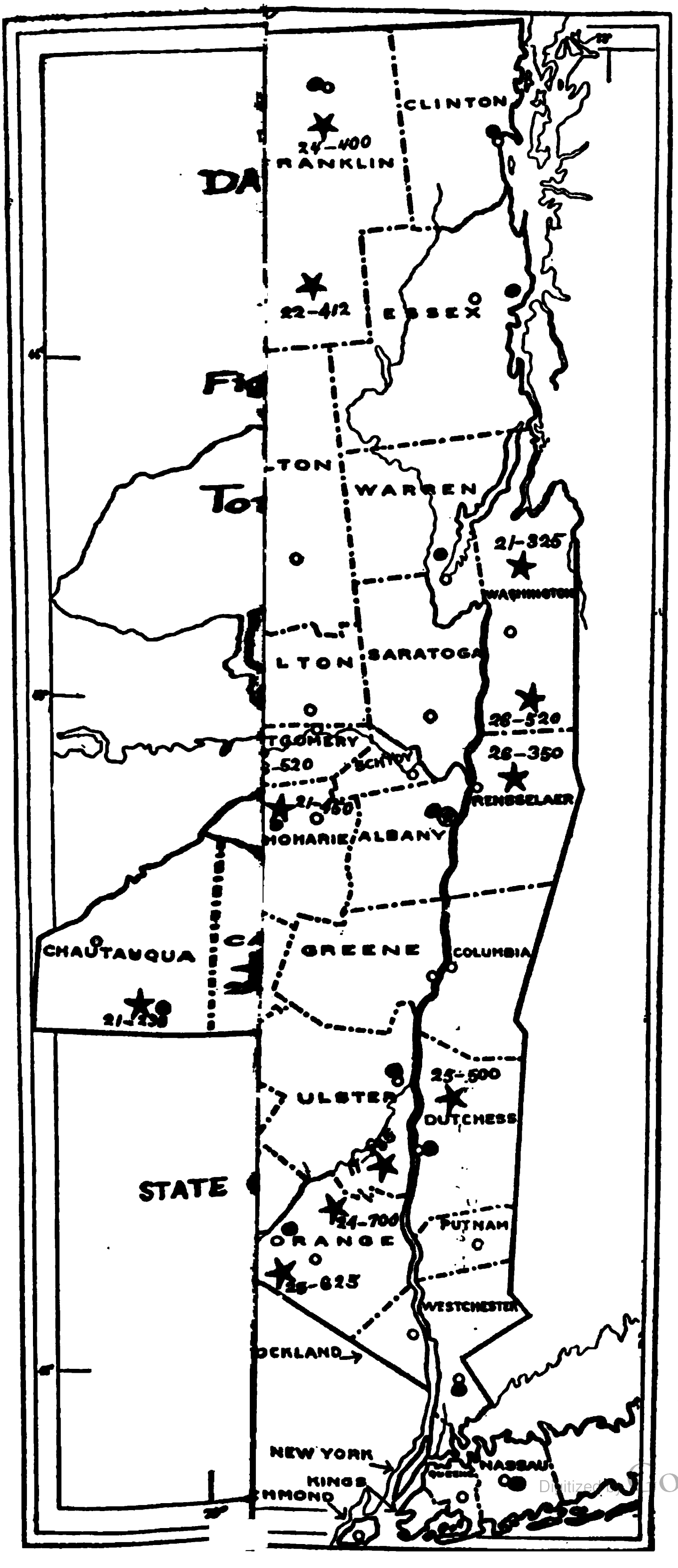
* Before this bulletin was finally taken from the press, the year's test for this cow was completed. As she was entered at the age of 2 years 235 days, she would be entitled to a certificate on a year's production of 274 pounds of fat. Her record, however, was 6,055.4 pounds milk and 344.399 pounds fat.

As indicated in the general introduction to this report, lack of funds and men have prevented the enlargement of this branch of the work. It would have been easy to have had at least a hundred associations in active operation.

Through the investigation of the Wicks Committee and the information furnished them by the farm bureau managers, supplementing the efforts of the Dairymen's League, dairymen are appreciating as never before that a knowledge of the cost of making milk is essential in obtaining an adequate price, and that better cows intelligently handled are always vital to economic production. The dairy improvement associations, which have been working along these lines for a decade, have the machinery to carry on such work.

The farm bureau managers were so occupied by the state agricultural census and kindred work growing out of the necessity for food production and conservation that they have been unable to give the necessary attention to association work which, under normal conditions, would have been possible. The scarcity of farm labor made it impossible for Messrs. Nicoll and Ennis to leave their homes to supervise the work. Through the assistance of the Dairymen's League and that of the Extension Department of the State College of Agriculture, and through the availability of the appropriation at the beginning of the fiscal year, July 1, a man has been secured to give his entire time to the work. In our next report, the results will be given in detail.

The increased compensation being paid on every hand has made it impossible to retain dairy demonstration agents in some cases and to secure new ones in others. If the work is to be continued, the daily compensation of these men will have to be raised fifty cents, and probably one dollar. A few associations have already done this. Eventually, all will be obliged to do so. It is the unanimous opinion of those concerned with this work that it would be a step backward to pay this increase from other sources than the dairymen immediately interested. Temporarily, it might prevent the abandonment of some associations, but ultimately it would weaken them all. An organization or business that must be provided with a crutch will never obtain sufficient strength to stand alone and endure.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It should be noted that Mr. Ennis spent three weeks at the State School of Agriculture at Alfred instructing a class in dairy demonstration work. Many of the best agents have been his pupils. Director Helyar at Morrisville has also been, as heretofore, a valuable helper in training men for this work.

The accompanying map is a copy of one shown by Messrs. Nicoll and Ennis at the National Dairy Show at Springfield, Mass. Their explanation and demonstration of the work in New York not only reflected credit upon the state, but gave valuable information to many who visited the exhibit. Dairy bulletins and other literature were distributed.

NEW YORK STATE DAIRY IMPROVEMENT ASSOCIATIONS

COUNTY AND ASSOCIATION	DATE BEGAN WORK	PRESIDENT	DAIRY DEMONSTRATION AGENT
ALLEGANY:			
Almond	April 1, 1917	I. D. Karr, care of R. Q. Smith, Belmont	Raymond W. Holman, Alfred
BROOME:			
Lisle	July 1, 1915	Frank Arnold, Whitney Point	Ralph E. O'Hara, care of J. F. Eastman, Binghamton
CATTARAUGUS:			
Conewango Valley	April 1, 1915	Glenn W. Hall, Dayton	N. J. Brown, Cuba
Freedom	Sept. 1, 1916	Geo. M. Leonard, Freedom	Albert C. Stady, Machias
Ischua Valley	April 1, 1912	E. B. Farwell, Ischua	Paul L. Green, Hornell
CHAUTAUQUA:			
Carroll	April 1, 1911	F. J. Halliday, Jamestown, R. D. 82	Ernest Engdahl, Sinclairville
CHEMUNG:			
Chemung Valley	April 15, 1917	Oscar Kahler, Elmira	Charles Harwood, care of Oscar Kahler, Elmira
CHENANGO:			
Chenango Valley	April 1, 1917	N. P. Stanton, care of E. P. Smith, Norwich	Howard J. Curkendall, care of E. P. Smith, Norwich
North Chenango	Nov. 8, 1915	H. H. Wilcox, care of E. P. Smith, Norwich	Ray H. Taylor, Smyrna
DELAWARE:			
Bovina	Nov. 20, 1916	E. W. Storie, care of E. G. Brougham, Walton	Jas. Calhoun, Andes,

NEW YORK STATE DAIRY IMPROVEMENT ASSOCIATIONS — (*Continued*)

COUNTY AND ASSOCIATION	DATE BEGAN WORK	PRESIDENT	DAIRY DEMONSTRATION AGENT
Delhi	May 1, 1911	A. J. Nicoll, Delhi, N. Y	Earl Monroe, care of A. J. Nicoll
Franklin	Mar. 1, 1917	James G. Ward, care of E. G. Brougham, Walton	Irving Wheat, care of E. G. Brougham, Walton
Hobart	Sept. 10, 1916	Henry M. Cowan, care of E. G. Brougham, Walton	L. L. Loomis, Hobart
North Kortright	April 10, 1917	H. W. Harper, care of E. G. Brougham, Walton	Richard Grundman, care of E. G. Brougham, Walton
Ouleout Valley	Feb. 1, 1917	G. M. Slawson, care of E. G. Brougham, Walton	Murray E. Knapp, care of E. G. Brougham, Walton
Roxbury	Nov. 1, 1912	Bruce Mead, Roxbury	C. W. Kroneck, Roxbury
Treadwell	April 27, 1916	H. A. Gladstone, Treadwell	A. Burton Smith, care of E. G. Brougham, Walton
DUTCHESS:			
Dutchess County	Dec. 1, 1915	Elias Cookingham, Staatsburg	Norman Andrews, Lagrangeville
FRANKLIN:			
Malone	April 10, 1916	John Ferguson, Malone	John Wheeler, Malone
Triangular	July 1, 1916		Walter S. Peck, care of C. M. Austin, Malone
JEFFERSON:			
Jefferson County No. 1	April 17, 1912	Fred B. Clark, Carthage	Chas. L. Tifft, Lacona
LEWIS:			
Lowville	April 20, 1914	Eugene Arthur, Lowville	I. C. Gilgore, Lowville

NEW YORK STATE DAIRY IMPROVEMENT ASSOCIATIONS — (*Continued*)

COUNTY AND ASSOCIATION	DATE BEGAN WORK	PRESIDENT	DAIRY DEMONSTRATION AGENT
ORANGE:			
Blooming Grove	July 1, 1915	Clarence Gerow, Washingtonville	L. J. Cunningham, Washingtonville
OTSEGO:			
Cooperstown	Nov. 1, 1914	H. Guy Roberts, Cooperstown, R. D. 1	Claude E. Bliss, Cooperstown, R. D. 5
Otsego No. 1	Dec. 1, 1912	A. Z. Carlton, Morris	Walter Cornell, West Laurens
Springfield and Cherry Valley	Nov. 9, 1914	R. E. Ough, Springfield Center	Robert J. Harbison, Cherry Valley
ST. LAWRENCE:			
Richville	Mar. 5, 1917	A. F. Spooner, Richville	James A. Washburn, care of E. S. Bird, Canton
Stockholm	April 11, 1914	V. H. Ballou, Winthrop	Raymond Potter, care of E. S. Bird, Canton
SCHOHARIE:			
Lawyersville	July 1, 1915	Marvin Bellinger, Seward	Le Ray Brown, Cobleskill
STEUBEN:			
Cohocton Valley	Feb. 18, 1916	Leo Shults, Avoca	John R. Allen, Bath
Southern Steuben	April 2, 1917	Amasa Travis, Jasper	H. L. Brotsman, Jasper
SULLIVAN:			
Central	Mar. 2, 1917	H. L. Burr, care of J. A. Richardson, Liberty	A. T. Knowles, care of J. A. Richardson, Liberty
Liberty	Dec. 5, 1915	Wm. R. Crary, Liberty	Arthur A. Booth, Liberty
TIOGA:			
First Tioga	Jan. 1, 1916	S. M. Lounsberry, Owego	Jas. H. Ball, Newark Valley

NEW YORK STATE DAIRY IMPROVEMENT ASSOCIATIONS — (*Continued*)

COUNTY AND ASSOCIATION	DATE BEGAN WORK	PRESIDENT	DAIRY DEMONSTRATION AGENT
TOMPKINS:			
Ithaca	May 1, 1908	Department of Dairy Industry, Cornell University	Wayne Dingman, R. 1, Ithaca
WASHINGTON:			
Cambridge Valley	June —, 1916	Geo. E. McGeoch, Cambridge	G. D. Pierce, Cambridge
Hartford-Hebron	April 24, 1913	John J. Getty, Hartford	Kendrick E. Chase, Smith's Basin
North Granville	Oct. 12, 1916	C. W. Sumner, North Granville	A. D. Acken, North Granville
WYOMING:			
Arcade	Sept. 1, 1916	C. H. Newman, Arcade	R. H. Robinson, Arcade
Attica	Nov. 1, 1914	Ray W. Maxon, care of H. M. Bowen, Warsaw	Maurice H. Wise, care of H. M. Bowen, Warsaw
Java-Chaffee	July 1, 1914	A. E. Nichols, Java	Scott Warren, Johnsonburg
Perry-Pike	June 1, 1913	John L. Fuller, Castile	Chas. T. Hunt, Bliss
Warsaw	July 14, 1914	H. W. Avery, Warsaw	Milo Davis, care of H. M. Bowen, Warsaw
Wethersfield	June 22, 1915	L. J. Zeches, care of H. M. Bowen, Warsaw.	Harold B. Stout, Bliss

FARM BUREAUS

The intimate affiliation with the farm bureaus, begun when some of those first established were financed from institute funds, has been strengthened.

The state census of crops and stock and other farm conditions and consequent appreciation of local leadership in the non-farm bureau counties have given a new impetus to the movement. Three new bureaus have been established during the year, with three more organized and ready to begin work July 1. Several changes have taken place in the personnel of the managers. In no case has a man retired because of incapacity or dissatisfaction on the part of the county; most changes have been due to promotion. Director Burritt has been appointed Vice Director of Extension, in the State College of Agriculture; his able assistant, H. E. Babcock, has properly been made State Director of Farm Bureaus to take effect July 1. The complete list of organized counties with the date of their organization and managers follows:

ORGANISED FARM BUREAUS IN NEW YORK STATE, JULY 1, 1917

H. E. Babcock, State Director, Ithaca.

H. W. Coryell, Assistant State Director, Ithaca.

County	*Manager*	*Headquarters*
Albany	H. E. Crouch	Court House, Albany.
Allegany	R. Q. Smith	Belmont.
Broome	J. F. Eastman	Chamber of Commerce, Binghamton.
Cattaraugus	H. K. Crofoot	Olean.
Cayuga	E. C. Weatherby	Auburn.
Chautauqua	H. B. Rogers	Jamestown.
Chemung	T. W. Vann	Chamber of Commerce, Elmira.
Chenango	E. P. Smith	Norwich.
Clinton	C. B. Tillson	Plattsburgh.
Cortland	A. S. Merchant	Cortland.
Delaware	E. R. Eastman	Walton.
Dutchess	F. H. Lacy	Poughkeepsie.
Erie	W. L. Markham	Chamber of Commerce, Buffalo.
Essex	H. J. Tillson	Essex.
Franklin	C. M. Austin	Malone.
Herkimer	C. A. Taylor	Herkimer.
Jefferson	F. E. Robertson	Watertown.
Madison	D. F. Putnam	Casenovia.

County	*Manager*	*Headquarters*
Monroe	L. A. Toan	Rochester.
Montgomery	W. J. Hagar	Canajoharie.
Nassau	T. M. Avery	Mineola.
Niagara	N. R. Peet	Lockport.
Oneida	O. F. Ross	Chamber of Commerce, Utica
Onondaga	J. R. Teall	112 Court House, Syracuse.
Orange	T. E. Milliman	Middletown.
Orleans	L. J. Steele	Albion.
Oswego	E. V. Underwood	Oswego.
Otsego	F. S. Barlow	Cooperstown.
Rensselaer	N. G. Farber	Troy
Rockland	L. A. Muckle	Spring Valley.
St. Lawrence	Errol S. Bird	Canton.
Saratoga	C. S. Phelps	Saratoga Springs.
Schoharie	R. F. Pollard	Cobleskill.
Suffolk	R. C. Parker	Court House, Riverhead.
Sullivan	H. P. Smith	Liberty.
Tioga	E. R. Zimmer	Owego.
Tompkins	V. B. Blatchley	Ithaca.
Ulster	W. H. Hook	Kingston.
Warren	E. W. Cleeves	Warrensburg.
Wayne	F. E. Rogers	Sodus.
Westchester	J. G. Curtis	Chamber of Commerce, White Plains.
Wyoming	H. M. Bowen	Warsaw.

COUNTY CONFERENCES

Following the plan inaugurated two years ago, these conferences have been held under the joint auspices of the Bureau of Farmers' Institutes and the Extension Department of the State College of Agriculture, the latter supplying the automobile. All that was said in last year's report as to the value of this method can be reiterated and reemphasized. In August, 1916, the eight counties in the northern part of the state were visited, and, though the weather was exceedingly hot, the same measure of interest as shown over the rest of the state in the June conferences, was maintained.

On May 14, 1917, Suffolk County was visited by the Director of Farmers' Institutes and Professor Crosby. Beginning June 4, Director van Alstyne, Professor Ralph H. Wheeler of the Extension Department, and Miss Bertha E. Titsworth of the Home Economics Department of the State College of Agriculture, started at Utica and visited during the week twelve adjoining counties in northern New York and in the Champlain and upper Hudson valleys. The week following, Professor George Phipps took Professor Wheeler's place, going through the Catskill, Delaware, and Schoharie valleys, and the following week through the Mohawk and Chenango valleys and the southern tier as far as Steuben, returning through Schuyler, Tompkins, Cortland, and Cayuga — 36 counties in all. The interest manifested was surprising in view of the late season, insufficient help, and the multitude of meetings of various characters growing out of the food situation.

It is worth while to mention the knowledge obtained by those representing the Department and the College in regard to the mood of mind of the farmers as to existing conditions — their evident desire to do all possible to relieve the food situation, handicapped by a most backward season and a scarcity of labor as well as their just resentment of a plethora of well-meant but unsound advice. The effect of such advice was seen in the breaking-up of much land that should never have been touched by the plow, as well as in the mass of large poorly-plowed areas (and hence impossible to fit) and in many instances to note the tendency to dispose of the dairies.

Nothing could better fit those in charge of the work to give practical instruction in the coming institutes and schools than this first-hand knowledge of the situation.

PUBLICATIONS

Owing to the small appropriation for printing, the Bureau has issued practically no circulars other than those absolutely necessary in dairy improvement work. The Bureau has been able to issue only three bulletins, and these have been unduly delayed because of lack of help. The Director's assistant, Mr. W. F. McDonough, being a member of Troop B, was called to the Texas border in June, 1916. In March he returned for a fortnight, at the end of which time he was again summoned for service. Owing to the budget system, there was no way in which his place could be supplied. In addition to the loss of his valuable services, we were unable to engage another assistant until the passage of an act late in the session of 1917, releasing the salaries of all state employees in the army and navy and permitting of their positions being filled temporarily. Under these conditions it was only possible to carry on the work of the Bureau by the Director's stenographer (in addition to her other work) assuming that of Mr. McDonough, and this without extra compensation, and by all the other members of the Director's staff taking on extra duties. This was done most cheerfully, even at the expense of losing a part of their vacations. Many things had to be left undone in addition to the failure to issue other contemplated bulletins.

It is very gratifying to the Director to know that the bulletins issued by his Bureau are appreciated, as is attested by the legislature appropriating $65,000 for the republication of bulletins previously issued, and this without even a request from the Department of Agriculture.

In July, 1916, there was issued Bulletin 85 — "Dairy Demonstration Work in New York State." This contains 70 pages and 6 illustrations. The table of contents and list of contributors follow:

Early History of the Cow-Testing Association, A. J. Nicoll.
Need of Dairy Improvement Association Work in New York State, A. J. Nicoll.
Plans for the future, A. J. Nicoll.
The Dairy Improvement Association.
Wyoming County's Dairy Improvement Association, H. M. Bowen.
Fundamentals in Dairying, Edward van Alstyne.
Agreement, Constitution, and By-Laws.

In September, 1916, was issued Bulletin 87 — "Legumes and Grasses in New York State"— a volume of 284 pages, with 23 contributors and 107 illustrations. The table of contents and list of writers follow:

History and Characteristics of Timothy, Jared Van Wagenen, jr.
Breeding of Timothy, C. H. Myers.
Soils for Timothy in New York, E. O. Fippin.
Grass Insects, C. R. Crosby and M. D. Leonard.
Diseases of Timothy, Charles Gregory.
Seeding Timothy Without a Grain Crop, Edward van Alstyne.
Fertilizers for Timothy, E. O. Fippin.
Barnyard Manure Almost Doubles the Hay Crop.
Cost of Production of Timothy and Clover Hay on Some New York Farms.
Harvesting the Hay Crop, H. B. McClure.
Grades of Hay and Straw.
Redtop, Lyman Carrier.
Orchard Grass, C. B. Hutchison.
The Blue Grasses in New York State, O. W. Dynes.
The Millets — Their Culture and Utilization in New York, H. N. Vinall.
The Sorghums — Their Use as Forage and Grain Crops in New York, H. N. Vinall.
Clover, A. J. Pieters.
Clover Insects, C. R. Crosby and M. D. Leonard.
Value of Clover as Stock Feed, D. P. Witter.
Causes of Clover Failure, Edward van Alstyne.
Alfalfa — The Enchanted Herb, F. D. Coburn.
Diseases of Alfalfa and Clover, Charles Gregory.
Suggestions for Obtaining a Stand of Alfalfa, J. L. Stone.
Results in Growing Alfalfa Obtained Along the Line of the Lehigh Railroad in Central New York, F. R. Stevens.
The Culture and Utilization of the Field Pea, H. N. Vinall.
Vetch, F. E. Robertson.
Soy Beans, E. R. Minns.
Cowpeas, E. R. Minns.
Sweet Clover, H. S. Coe.
Teosinte.
Spelt.
Pastures in New York, F. E. Bonsteel.
Fitting and Putting Down Land to Permanent Pastures and Pasture Grass Mixtures, J. H. Barron.
Follow-up Work on Grass Seeds.

In June, 1917, was issued Bulletin 96 — "The Sheep Industry in New York State" — being the fifth in the live stock series. This contains 237 pages, with 27 contributors and 54 illustrations. Some of the latter show some of the most correct breed types possible to photograph. The table of contents and list of contributors follow:

History of Sheep in New York, E. van Alstyne.
Fencing and Pasture, E. van Alstyne.
The Sheep Industry, Damage by Dogs, and the Remedy, D. P. Witter.
Sheep Buildings for Winter Protection, T. Reg. Arkell.
Summer Housing of Sheep, T. Reg. Arkell.
Common Diseases of Sheep and Their Treatment, R. A. Craig.
Selection and Care of Breeding Flock, E. van Alstyne.
Raising Winter Lambs, C. C. Perry.
Winter Feeding of Lambs, I. C. H. Cook.
Conditions Affecting the Wool Industry, A. C. Bigelow.
County Cooperation, F. S. Barlow.
Sheep at the New York State Fair, F. D. Ward.
Slaughtering and Marketing Mutton and Lamb, K. J. Seulke.
The Value of Mutton as a Food, Ida S. Harrington.
Statistics.
List of Sheep Associations.
Constitution and By-Laws of the Ostego County Sheep Breeders' Association.
Goats' Milk for Infant Feeding, W. H. Jordan and G. A. Smith.
Breeds of Sheep.
    The Merino, S. M. Cleaver.
    The Rambouillet, C. S. Plumb.
    The Southdown, F. S. Springer.
    The Shropshire, J. C. Duncan.
    The Hampshire, C. A. Tyler.
    The Oxford, W. A. Shafor.
    The Suffolk, C. S. Plumb.
    The Cheviot, F. E. Dawley.
    The Dorest, Arthur Danks.
    The Cotswold, F. W. Harding.
    The Lincoln, Bert Smith.
    The Leicester, A. J. Temple.
    The Tunis, J. N. McPherson.
    The Black-Faced Highland, F. E. Dawley.
    The Karakul, W. M. Rider.

FINANCIAL REPORT

Owing to the difference in the calendar year of the institutes and the state fiscal year, it has hitherto been impossible, in the report of farmers' institutes, to give a financial statement which would, without special explanation, conform to that made by the Commissioner of Agriculture at the close of the fiscal year. Now that both years end June 30, such statement follows:

FINANCIAL STATEMENT

July 1, 1916 — July 1, 1917

Salaries of lecturers (Appropriated for lecture work)	$11,002
Travelling expenses (Allotted from general travelling expense fund)	6,000
Printing (Allotted from printing fund)	3,000
	$20,002

In order not to overdraw the $6,000 allotted by the Commissioner for expenses, the Bureau of Farmers' Institutes was able to obtain very little help from the College or the Experiment Station. In many cases the regular workers subjected themselves to privations which no state should ask of its employees. With larger appropriations to the Department for expenses and printing, more and better work will be done the following year.

COOPERATIVE WORK WITH COLUMBIA UNIVERSITY

A series of sixteen lectures was arranged, beginning December 8, 1916, and ending March 30, 1917. As indicated in the schedule following, without disparaging the courses given in the past, Professor Morgan and the Director were satisfied that no other series came so near meeting the needs of the people who attended both as to subject matter and presentation. This is as it should be, and the course contemplated the coming winter should, if possible, be better than the last. It will be noted that many of the lecturers have come from the College of Agriculture. It is a most delightful sign of the times when this great college so freely contributes of her best to advance the interest of this Benjamin among our agricultural institutions — appreciating, too, that this form of extension work touches a large and important class not otherwise reached.

It is to be regretted that it has not been possible to obtain a summary of all the lectures. Treating as they do subjects fundamental to agriculture, they are worthy of the wide circulation made possible by publication in this way — both as showing the broad and sound conception of agricultural matters on the part of Professor Morgan and the faculty of Columbia University and because it adds most valuable matter to this report.

Date 1916–1917	Subject and Speaker	Attendance
December 8	"The Pro and Con of Farm Life by a Farmer, the Son of a Farmer." Mr. Jared van Wagenen, Jr., Lawyersville, N. Y.	80
December 15	"Farm Labor Problem — Present and Prospective. The Farm Manager, the Farm Hand." Director Edward van Alstyne, Bureau of Farmers' Institutes, New York State Department of Agriculture.	60
January 5	"Marketing Farm Produce — Individually and Collectively." Professor Alva Agee, Secretary, State Board of Agriculture, Trenton, N. J.	55

Date 1916–1917	Subject and Speaker	Attendance
January 12	"Practical Orcharding. Tree Fruits in the East." Hon. Charles S. Wilson, Commissioner of Agriculture, New York State.	85
January 19	"Profitable Potato Growing in New York State." Mr. E. R. Smith, Kasoag, N. Y., President, New York Potato Growers' Association.	95
January 26	"Orcharding in Connection with Mixed Farming." Director Edward van Alstyne, Albany, N. Y.	85
February 2	"The Production of Timothy Hay for Market." Professor E. G. Montgomery, New York State College of Agriculture, Ithaca, N. Y.	80
February 9	"Maintaining Soil Fertility." Professor George W. Cavanaugh, New York State College of Agriculture, Ithaca, N. Y.	85
February 16	"Rotation of Crops." Professor O. S. Morgan, Columbia University.	90
February 23	"Costs and Profits in Dairying." Professor C. W. Larson, Columbia University.	60
March 2	"Value of Milk as a Food." Professor Flora Rose, New York State College of Agriculture, Ithaca, N. Y.	100
March 9	"Construction of a Modern Poultry House for Egg Production." Mr. W. G. Krum, New York State College of Agriculture, Ithaca, N. Y.	80
March 16	"Selection and Breeding of Poultry for Egg Production." Mr. L. M. Hurd, New York State College of Agriculture, Ithaca, N. Y.	80
March 23	"Profitable Swine Production on the General Farm." Mr. Harry Harpending, Dundee, N. Y.	60
March 28	"Potato Culture." Mr. Daniel Dean, Nichols, N. Y.	100
March 30	"The Duty of the Farmer to the Community." Dean A. R. Mann, New York State College of Agriculture, Ithaca, N. Y.	45
	Total	1,240

THE PRO AND CON OF FARM LIFE

Jared Van Wagenen, jr., Lawyersville, N. Y.
Farmers' Institute Lecturer

I confess to you that the subject as it is announced for the afternoon is not in just the form that I had expected. I had chosen for a topic "The Disadvantages of Country Living"; but I yield to the good judgment of Director van Alstyne when I try to hold up both sides of the shield and to present the case for and against farm life.

First, let me frankly give you my own point of view. I am a farmer of farmers. My people have lived by the soil so long that I do not know when they have had any other occupation. We have dwelt on one farm in the hill country of New York for considerably more than a century and I have no more earnest wish for my children than that they should find pleasure and satisfaction in farm life. Still, I remember that I am speaking to an audience of city folk — folk whose ideas of farming are in many cases derived from the agricultural wonder-tales in some of our popular magazines and who may have conceived impressions that are fundamentally false and that make no reckoning of the real difficulties and unpleasant features of life on the land; hence I have thought that I might do a real service if I should stand and cry concerning the disadvantages of country living. Let me do so briefly and then let me speak of a few of the great underlying reasons that make for the permanency and soundness and satisfaction of farm life.

We do no real service to agriculture by shutting our eyes and refusing to see its disadvantages, and we may as well frankly recognize the fact that there are very many ways in which rural life compares unfavorably with city conditions. Let me catalogue for you some of the drawbacks of living under real farm conditions.

DISADVANTAGES

Scarcity of Men and Money

I suppose the very fundamental trouble — the real problem of the open country — is the scarcity of men and money; that is, the scanty population and lack of wealth to do many of the things that are performed without question as a part of the municipal duty of every city. Understand me — I am not saying that farmers as a class are poverty-stricken or that our calling when intelligently followed is unremunerative. I am only saying that from the very nature of their business farmers must always reside in small and scattered social groups — isolated homes, or at best cross-roads hamlets — and that necessarily there can be no large aggregates of wealth. There are very many desirable institutions that are impossible except in fairly large and compact communities where there is available wealth. There are many social and educational functions of city life which the country must either get along without, or, if maintained at all, they are inefficient and burdensomely expensive. Let me give you concrete examples of these truths.

Police and Fire Protection

Take police protection, if you please. In this wonderful town, at every hour of the day or night, visibly-constituted authority in uniform patrols your streets and makes literally true the words of the old song,

> "Someone to watch you while sleeping
> So no one may harm you at night."

Well, in the country we, too, have official protection. We have the deputy sheriff and the village constable; one of them is the fertilizer agent and the other is the local painter. It is but fair to say that such ruffianism as the country knows is largely of city origin, and the automobile especially has been the means of carrying night prowlers and loafers into country neighborhoods. The farmer must still be unaided the guardian of his own family and truck patch and hen roost, and I may add that there are farm communities near cities where the annoyance and loss from petty thieving has become a serious matter.

Take fire protection — there is surely nowhere in all the world a better example of trained, courageous efficiency than a great city fire department. It is the last word in preparedness and watchfulness. When we have a fire in the country, willing hands may clang the old church bell according to immemorial custom but that is about all. We stand in pity and helplessness and see house and barns — ofttimes the fruits of a lifetime of toil — go up in a red flare at midnight, but we can do nothing. That is why the insurance rate for farm property where I live is about twelve times as great as in the downtown districts of New York.

Water Supply

Take the question of a water supply. Hot and cold water, toilet and bath, are unquestioned features of every city home. These pleasant conveniences are comparatively rare upon the farm — not because the farmer would not enjoy them, but because a suitable water supply is a very difficult problem on many farms. On Hillside Farm we have piped the water from a mountain spring 3,700 feet distant, down a hill, through the creek, and through a belt of woods, and the expense measured by our resources and the value of the farm makes your boasted 141-million-dollar Ashokan system seem very cheap. This is merely because the farmer must do individually what the city finds possible to do cooperatively. Remember that you may stay in New York and enjoy this water supply for less money than will suffice to dig a well beside the kitchen door — and let me add in passing that this same well is the reason why there is more typhoid on lonely farms than here in this congested hive of humanity.

Schools

Let me now, because I am speaking to city folk, tell of some of the social and educational wants of the country.

The first is our schools. It is true that the country boy has been marvelously successful in life, and that, out of all proportion to his numbers in this city and every great capital of our country, he sits in the seats of the mighty; but please remember that it is in spite of and not because of his school advantages. We have in our state approximately ten thousand one-room, cross-road district schoolhouses, where a little, well-intentioned miss presides over the educational destinies of from six to thirty youngsters—not infrequently attempting the wholly impossible task of doing the work which normally belongs to eight teachers in as many grades. It would be ridiculous if it were not so pitiful. Compare that, if you will, with the highly specialized and altogether wonderful school system that is a part of the life of every well-ordered city. Yet, let me say this because it is so true: You must not say that the farmer is careless for his children or believes not in education. The facts are that he maintains relatively the most expensive school system in the world, and if in your great city there should be laid for school purposes a tax as great as is patiently, patriotically, uncomplainingly born in thousands of school districts of this state, your citizenry and your press would cry out that it was confiscation. The rural school district that has within its bounds less than forty thousand dollars of taxable property and yet maintains any semblance of a free public school ought to excite your heartiest admiration. It should be said also that at present there are certain fundamental changes in the policy and laws of the state relative to the country schools which promise to do much to correct these bad conditions, many of which seemed ineradicable.

Charities and Entertainments

I have time — not for discussion — but only for drawing your attention to the fact that country dwellers, like every other well-ordered community, must have churches and that the problem of supporting a decently-paid ministry and an attractive and efficient church organization is hard enough where families are few and scattered, where wealth is small, and where outworn denominational differences in some cases still forbid hearty cooperation.

I can only mention the fact that in most farm communities there are no concerts or lectures or dramatic art or libraries worth the name. I enumerate it moreover as a distinct asset that there are also no moving picture emporiums around the corner.

THE BRIGHT SIDE

Some of you may say that I am making a most dismal exhibition of country life. Let me then speak from another viewpoint and tell why, as for me and my children, we will serve the farm.

The first is perhaps a minor reason, and yet one deep down in the heart of every one of us. Perhaps of all the promises there is none that voices so much of fond desire as this: "That thou mayest live long in the land." I have not forgotten that on the face of the returns the death rate of this city is no larger than that of rural New York, but will remind you that vital statistics are distorted by the facts that all communities of less than 8,000 inhabitants are included as "rural"— a most ridiculous classification! All cities are largely recruited from an immigration composed largely of the young and middle-aged, and hence have a selected lot of lives. On the other hand, the country loses to the city every year tens of thousands of men and women in the very flower of their youth and we have left behind an undue proportion of the aged and the very young — classes where the death rate is abnormally high. In spite of this we make a fair showing, and I feel sure that if the highest good in life be a sound digestion and a green old age with childrens' children not a few to stand by your grave, then there is nothing like life on the land.

Again, I feel sure that the farm is the best place in all the world to bring up children — physically and morally. After all, parks and city playgrounds and paid instructors in gymnastics and (if you be rich) long summers in the country or in camp can hardly take the place of the great outdoor heritage of every farm boy. Morally, the farm boy also has the advantage. I think it was Elbert Hubbard who said that God made the country and man made the city, but the devil made the small town; and I believe this just about summarizes the moral comparison of the three. I am not going to stop to argue the relative righteousness of city or country. I will merely say that in most of the strictly farm communities of this state the saloon is discredited, outlawed, and gone; and when you catch up with us in this respect, we will set you a new pattern. It is a pretty good index of the farmers' position on other ethical questions.

Another advantage of the country boy is that he receives a training in systematic industry that his town-bred competitor rarely knows. There are always cows to bring and milk, hens to feed, onions to weed, berries to pick, and a hundred other jobs — the only danger being that the boy will have too many of these tasks;

yet this same sort of Spartan training sends him forth clear-eyed and clean-lived and overcomes his obvious educational defects so that in every walk of life the farm-bred boy goes on his conquering way.

There is also this comforting fact — that farming is a life job and that there is no " dead line." I am told that in city industrial life the man of fifty, or sixty, at most, is invited to step aside and make room for a younger man. I bear witness to the fact that on the farm there are always tasks and duties that are suited to a man even in the leisurely years that lie past the three-score and ten, which in our common thought and speech are supposed to mark the end of active life.

But after all, men and women, the real kernel — the crux of this whole question of city versus country living — is not one to be answered in terms of economics or sociology. The answer is within your own lives and heart. The great decision rests on this: Are you farm-minded?

If you love crowds and the roaring music of traffic on the city pave, and the long avenues of lights at night, and all the sights and sounds and sensations and delights that go to make up life in this wonderful metropolis, stay by it and live out here your life.

If you love summer dawns and growing things and wheat fields bowing to the breeze and young corn dancing and shimmering in the summer sun; if you can joy in the howl of winter storm through icy, clashing branches; if you can find always new wonders in the miracle of the rolling year; if you can be happy sometimes alone; if you have resources of thought and content within your self; if you can find friendship with simple men and satisfaction in simple things — then, if you are worthy, come and cast in your lot with us who are to the manor born and we still give you welcome and call you " Brother."

FARM LABOR PROBLEM — PRESENT AND PROSPECTIVE

EDWARD VAN ALSTYNE, Kinderhook, N. Y.
Director of Farmers' Institutes

After the farm itself, one of the most important factors is that of labor—as important today, when my eighteen-year-old son can, with a team and binder, do as much work as four men did with a team and reaper when I began farming forty years ago, or as ten men did in my father's boyhood when the grain had to be cradled, and raked and bound by hand. In those days, it was easier to get the five or ten men than it is to obtain the services of one now.

They had strength and endurance and a certain skill not always possessed today; but few of them had the mechanical ability to operate and keep in order our labor-saving machines of today — not only those in the harvest field, but the gasolene engines attached to spray pumps, ensilage cutters, traction engines, and milking machines. This is illustrated by the experience of a young man with whom I talked recently as to the working of the milking machine in his sixty-cow dairy. He said it was satisfactory, and two men milked the cows where formerly it required four or five. At that time, if need be, he could be absent, a few more cows falling to each man and the milking was done; now he found it necessary to be there at each milking.

EVOLUTION OF LABOR CONDITIONS

In order to get a clear idea of the situation and the probable future of the supply of farm labor, let us review the situation. During the last generation — the steam age — men have been going from the farm to the town, where more regular and shorter hours, and sometimes higher pay, attracted them. The consequent lack of labor on the farm has about been met by labor-saving machinery and by avoiding intense cultivation of many of the poorer, more remote lands.

This exodus carried away a large portion of our American-born expert farm hands, and with them a goodly number of Irish, Scotch, English, Dutch, and Germans of the first and second generation, who were an unusually good type of farm help. Many of all these thrifty classes that remained became tenants and later owners of farms, their places being taken to a great extent by a class of foreigners accustomed to hard labor, but lacking the skill and intelligence of the native-born and the immigrant of forty or fifty years ago.

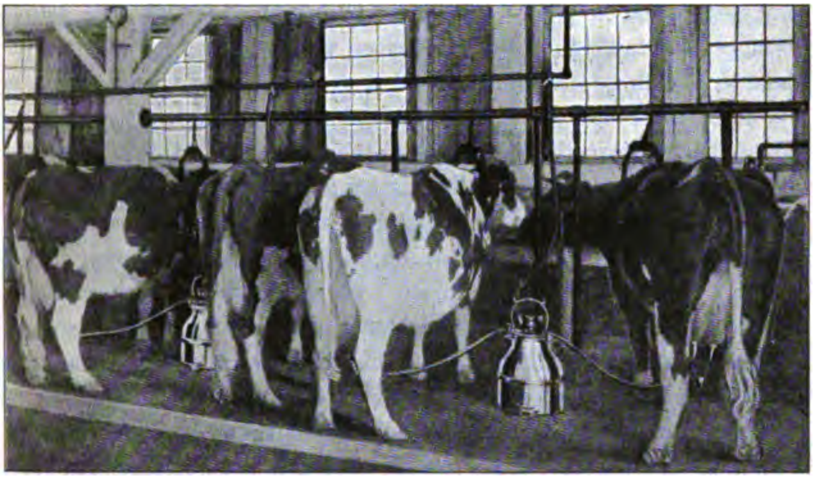

FIG. 3.— MILKING MACHINES IN OPERATION.

In other words, farmers have had to be largely dependent for much of their help on farm labor of the unskilled class, labor well-suited to the mines and public works, where ability to handle a pick and shovel are the chief requirements, and who are content to live under conditions the better class would not tolerate. Farmers not only had to compete with the wages paid to skilled labor in the shops, but with the rather high daily wage paid by contractors. In too many cases the farmer had steady work for only six or eight months of the year. When there was no more lumbering, and when in our Hudson valley the ice harvest, which formerly lasted a couple of months, came to be completed in half that time, there was no longer work enough to keep the laborer on the farm during the slack season. All these contributed to keep the best class of labor away from it.

A readjustment of farm work with winter dairying, shorter and more regular hours, tenant houses with gardens and other privileges, with the higher wage made possible for the last few years by enhanced prices of farm products, with the high cost of living and congested quarters in the city, has tended to equalize matters.

LABOR OFTEN TOO SCARCE AND HIGH TO GATHER CROPS

Nevertheless, there is a limit to what the farmer can afford to pay even when help is obtainable. One man this past fall found it more profitable to allow low-priced pears to go to waste rather than to pay three dollars a day for men to harvest them. This is a side of the picture not presented when the pathetic cry goes up about the waste in the country and the hungry mouths in the city. To refuse to harvest at a loss is an indication on the farmer's part of real efficiency. Last summer I had bushels of sour cherries go to waste, much to my regret, because they were so cheap it did not pay to pick them at the price I should have had to pay labor.

The chief reason why farmers have not responded to a demand for more sanitary milk has been that they were not paid enough more to reimburse them for the extra expense.

There are many things that could and must be done on any well-kept farm, which have no direct relation to immediate crop production, and which are not taken into account by those not to the "manor born." Among these are fence building, cutting bushes, digging and cleaning ditches, and other similar work. Left undone, the farm soon becomes unattractive and to a greater or less degree unprofitable; but when labor is scarcely sufficient to make a crop, and unduly high, such jobs must go undone.

Another contributing cause for a labor price too high for the farmer in some sections, is the occupancy of the land by a class of the absent owners, who are farmers (?) — God save the mark — for pleasure and who pay a wage far beyond the earning power of the laborer, which demoralizes the farm labor situation in the whole community.

FOREIGN LABOR NECESSARY

All of the above must make it apparent that a large amount of the laborers on our farms, as well as elsewhere, have come from abroad. For years there has been a scarcity of white men the world around in spite of the absence of famine and pestilence. Until the devastating war of the past two years, developments in the most advanced European countries have kept most of their citizens at home.

Each year since the beginning of the present century has seen tremendous public enterprises going on in this country as well as in the old world; among such are the construction of the Panama Canal, and — right at our doors — the subways, the new water supply for this city, and the Barge Canal — not to mention many other extensive, even if less conspicuous, enterprises. Few people realize that the Pennsylvania Railroad has in its employ as many people as were engaged in constructing the Panama Canal. Two industries, the telephone and the automobile — almost unknown forty years ago — are employing a great army of workers. Such instances might be multiplied. All these have been absorbing workers at a stupendous rate, the supply only made possible by the coming of aliens.

AMOUNT AND NATURE OF IMMIGRATION

From June 30, 1910, to a like date in 1914, the annual immigration to the United State has averaged 1,133,283. In 1913, it was 1,197,892. Of these, 868,690 came from southern Europe, including Russia and Austria-Hungary. From northern Europe came 175,937.

For the decade ending 1914, there settled in the fourteen states east of the Mississippi, excluding all the states south of the Mason and Dixon Line, 8,356,952; in the sixteen states west of the Mississippi, and north of the above line, 1,137,228. Of these settling in the eastern division, 2,017,126 were classed as farmers and farm laborers; in the western division, only 235,287. This will convey some idea of the distribution of our immigrants under ordinary industrial conditions. During most of this time farm labor had not been abundant.

PRESENT CONDITIONS

The year ending June 30, 1915, (the first year of the war) immigration fell to 434,244, or 32.3 per cent.

America is now in the midst of great industrial prosperity; labor is scarce, skilled workmen are at a premium. In normal times immigration increases when this country is prosperous, and when industry languishes many return to their home countries. In 1913, 248,559 did so; and in 1914, 257,295 — most of them to Italy, Austria-Hungary, and Russia. They were the unskilled employed in railroad construction and in the mills and mines.

CONDITIONS IN EUROPE

There have been killed and disabled annually in the war from three to five million men, the young and strong. Wealth has been destroyed — buildings, mills, railroads, horses, and cattle. After the war these damages must be repaired. No such shortage of men and such unparalleled demand has ever confronted Europe. This labor vacuum will mean an increase in wages. If economic conditions are good, the European laborers will no doubt remain at home. Thousands now leave America to live at ease in their native land; with better opportunities there, is it not fair to suppose that more will do so?

Colossal sums will be needed to rebuild the cities, start the wheels of industry, restore the farms, and plant the crops. Should such sums be obtained, there may be an emigration from America. There are now some 13,000,000 foreigners in this country, with 18,000,000 who are the immediate descendants of foreign-born parents. In many of these the ties of native land are strong, the claims of this country light. The outgoing emigration is now from two to three hundred thousand annually, which might easily be doubled.

With continued prosperity here, and with the great falling off of the immigration during the war and the return of others, unemployment has practically come to an end in America. During the past year state highways contracted for have not been built; other lines of private and public enterprises have failed of completion. In some cases crops have not been gathered because there were no laborers. The new railroad mileage constructed during the last year was only 933 — the least in any year since 1849. There have been only three years since that the new mileage fell below 1,000; they were 1861, 1862, 1864, years of unparalleled calamity. In 1882 and 1887, new mileage exceeded 10,000. Instead of the cry "Why stand ye all the day idle?" the call now is, "Who will work today in my vineyard?"

RESULTS OF THE SHORTAGE OF LABOR

Wages will continue to rise. Labor has already demonstrated its power, as indicated by the passage of the Adamson Act. Hours of labor are being shortened. Higher wages for men mean fewer women and children in industry. Domestic servants will be more difficult to obtain. High wages mean more to spend for food, clothes, and rent, as well as for the comfort and amenities of life.

If farm labor is scarce, and population remains stationary in the city, land values may go down. Some of the present high value of land is due to the speculative demand, which sprang from an increase in urban population and the consequent desire to go into the country.

The war has destroyed many of the land barons of central and northern Europe. Those remaining are impoverished; their estates are devasted. Many more will be so. It would be as impossible to reestablish the old standards of living as it was for the people of the South after the Civil war. This will probably result there, as it did here, in the division of these great landed estates into small holdings, as was also the case in France after the French revolution. The same thing may take place in Great Britain. Much of the immigration to this country has been brought about by a bad system of land tenure and landlordism.

A distribution of the land in France into small holdings has made her the rich country that she is, with practically no emigration for a century. The funds for the payment of the indemnity after the Franco-Prussian War, the financing of de Lesseps' Panama canal scheme, and the subscriptions to the government loan in the present war come mainly from the savings of her peasant landowners. If the land in European countries is divided into small parcels and is made available for rent or purchase on easy terms, it will certainly deter men from emigrating and may encourage immigration.

In view of the above, it would seem as if the immigration of able-bodied men will not assume its former proportions for years to come — possibly never. The prosperous countries of France, Germany, Belgium, and England have contributed little to the influx into this country in recent years.

Many are prophesying an enormously increased immigration into this country from the Old World because of enforced military service in a war brought on by their rulers, because of dissatisfaction with economic conditions and the breaking of ties by the ravages of war, and for the purpose of escaping the burdens of taxation that are sure to follow.

All these facts are worth considering, yet I believe they are outweighed by what I have previously stated. These statements are disheartening. I am no pessimist or prophet of evil. I assure you that no industry that is based on serving humanity will ever perish off the face of the earth; seed time and harvest shall not fail. Nevertheless, it behooves us to take heed to these signs of the times, that we may shape our course accordingly.

SUGGESTIONS FOR THE FUTURE

I would first emphasize that rarely, if ever, is a farm a financial success unless the owner knows from actual experience what a day's work is and how to do it in a workmanlike manner. No one would give the construction of a building to a contractor who did not know the details of his business. There is even more need of such knowledge on a farm.

Unfortunately, this cannot be obtained from books or casual observation. The trained eye can tell at a glance when the land is fit to work, when the hay and grain should be cut, and when they are fit to put in the barn — not to speak of such lesser, but very important, matters as how to set a plough, pitch on or off a load of hay, grind a scythe or mower knife, milk a cow, and a hundred other odd jobs. Unless a man knows the amount a man or team should do under varying farm conditions, he will either be cheated or imposed on by his men, or he will try to exact more from them than they can do.

The certain scarcity of labor will make it unwise to farm poor land, which requires a maximum of labor to produce a minimum

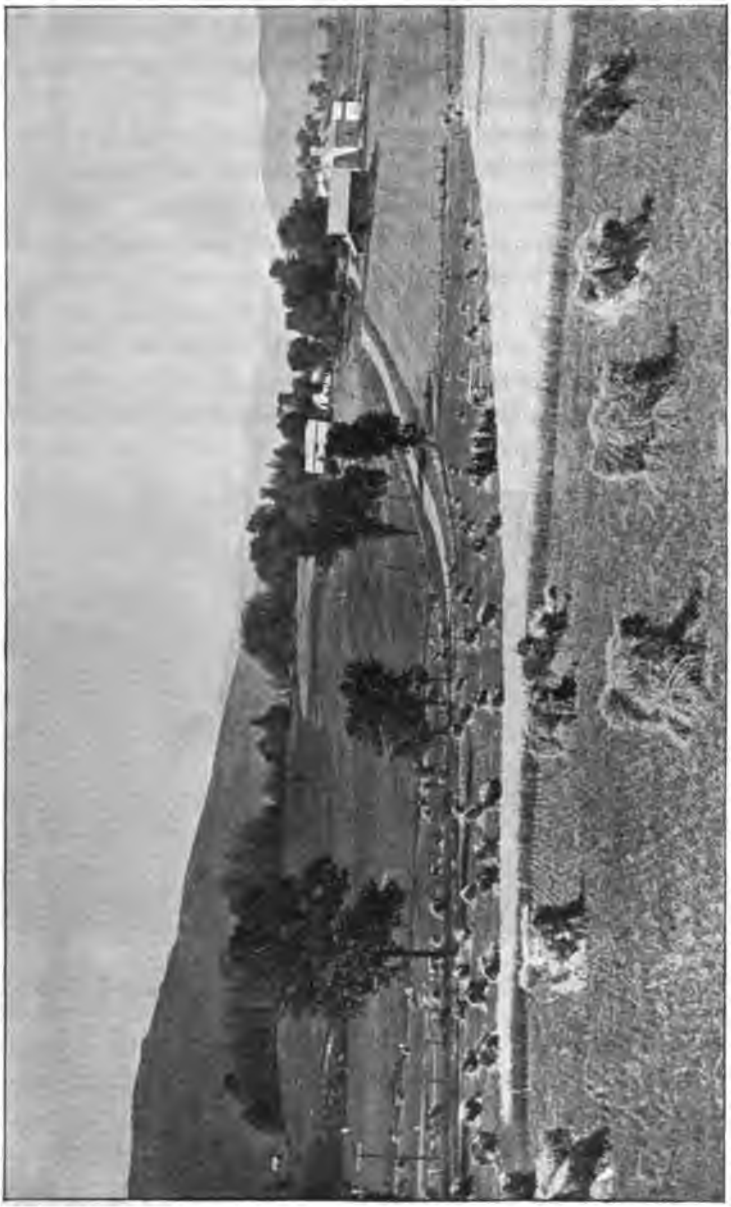

FIG. 4.—LABOR IS SAVED BY THE USE OF A BINDER.

of crops. It will not pay, even on the best land, to grow low-priced crops or those on which the margin of profit is small, except as they are needed on the farm — the oat crop, for example. The crop should be such as will permit the use of labor-saving machinery, either loaned or hired.

Men prefer to work where there are several hands employed, both because many kinds of work are more easily done by two or three and because of the inherent social instinct. Therefore, a farm system should be worked out which will mean continuous labor for a sufficient number of hands by the year. I shall go into this in more detail in my lecture on "Orcharding and Mixed Farming," which is to be given in this course on January 26. Such a system calls for tenant houses, which mean a more stable class of men, much less likely to leave on slight provocation than those who are not anchored to the soil.

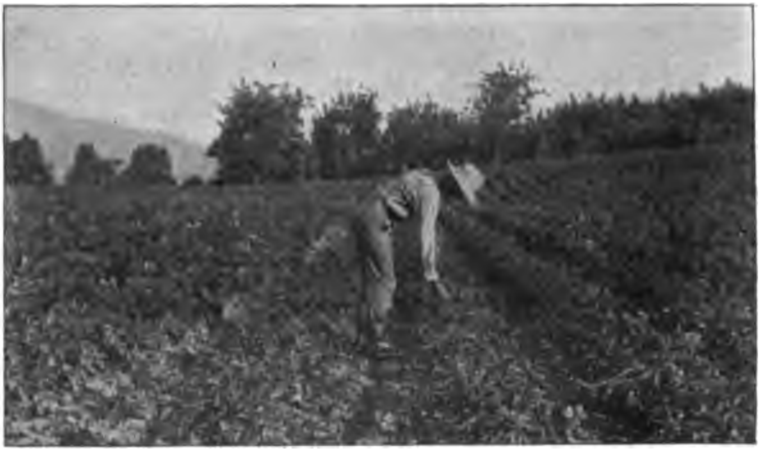

FIG. 5.— A PROFITABLE CROP OF POTATOES.

The foliage is in perfect condition as a result of intelligent fertilization and cultivation followed by thorough and timely spraying for bugs and blight.

The crops would be such as will fit into one another with least overlapping, in order that an extra amount of labor may not be required at any one time. Of course, one's location near a town where certain kinds of transient labor is available will do much to determine the character of the crop and such a one as we can afford to expend labor on at the price that prevails.

We should understand that it is the net, not the gross, income that counts. A crop of hay netting $20 an acre, requiring comparatively little labor and other expenditure, may be—and usually is — fully as profitable as one of potatoes, the gross sales of which run into the hundreds, but which requires much greater expenditure of labor, seed, fertilizers, and spraying material. I expect we shall be obliged to let some of our less productive fields literally "go to grass" and others to woodland.

FARM MANAGERS

This is a magic term, equally attractive to the city man who would own a farm, and who thinks a manager will waft him to agricultural contentment and perhaps wealth; as well as to the ambitious but impecunious young man, either with or without technical training, who is anxious to do big things if some one will furnish the capital and pay a sufficient salary.

There are some burning and shining lights acting as managers who are a credit to themselves and a source of pleasure to their employers — not often a profit, the latter being the fault of the owner, who wants things done on a scale and in a way far from economical. For this reason, many a good man fails to give satisfaction as a manager, and others equally good decline the job. The owner usually starts out with the idea that he is going to make money; on account of his lack of practical knowledge or because of things he wants done, which, however desirable, interfere with seed time and harvest, the manager fails to make the farm show a profit. The owner is dissatisfied; he changes managers to encounter new difficulties, and he wonders why his picture is so different from the one he had previously hung on the walls of his mind.

Again, a salary of from $1,200 to $2,000 per annum is more than the average man can earn on the farm, particularly where he does not work with his hands. The overhead charges are proportionately too great. Most men capable of successful farm management are on farms of their own. True, they often obtain a smaller income, but "they are monarchs of all they survey" and "are not under bondage to any man."

The idea is quite general that the graduate of an agricultural college is the beau-ideal manager; personally, I should prefer a man of mature years and experience, who knows how to do work and to handle men, who is broad-minded and anxious to carry on his operations according to the laws of plant and animal life — not tradition. Too often the college graduate has had little economic experience, even if he has been brought up on a farm. He knows little of business or how to handle men — both absolutely necessary for success. Today, when a man is found possessing these rare qualities, there is a better job awaiting him as manager of a farm bureau. Usually, the young man is rather apt to have an exalted idea of his own abilities, and inclined to look for a place where he will not have to work hard.

There are many unsuccessful farmers who lay their failures to "bad luck" — "Too proud to work, to beg they are ashamed." They are in the market as managers. Frequently I am importuned by such to get them a position. Alas! and alack! I dare not tell them some wholesome truths. Poverty usually compels them to become "hewers of wood and drawers of water," for which work they are best fitted.

Another difficulty with any sort of manager is that those under him know they are being paid from the pocketbook of the owner, not of the manager. Woe betide the owner who does not make his manager supreme or who allows his men to appeal to him over the head of his manager! I know the above is discouraging, but I am sure it is the truth, and I am doing a service to any who are looking to have "the winter of their discontent made glorious summer" by hiring or becoming a manager. When success follows, it is the exception, not the rule. Managed farms are not often a success from an economic standpoint.

THE TENANT SYSTEM

As an immediate financial proposition, the plan of operating farms by a tenant who either pays a cash rent or receives a share of the proceeds is usually better for the owner than operation with a salaried manager. The work is done much more economically by one who has a money interest, who is usually a fair workman, more or less of an experienced farmer. Being owner of the equipment — and either in whole or in part of the live stock, which is much better than for it to be the property of the owner — he has a personal interest and exercises a care not generally given to the goods of another.

On the other hand, a system of tenantry usually results in a deterioration of the property. Only that work is done which has a distinct relation to crops. The maintenance and increase of the fertility of the soil — always fundamental to success in farming — has little or no part in the average tenant's mind. I know more than one farm which, under the skillful handling by the owner, was a source of profit and a delight to the eyes of the beholder, and which after a few years of tenant farming have become annually less productive, and appear to the passer-by like "the field of the slothful and the vineyard of the man void of understanding." Few tenants have any appreciation of or can afford long-time investments.

Another very important point is that with a tenant, no matter how carefully his contract is hedged about with restrictions, the owner has little to say. He can only look on and grit his teeth. He may "bless with his mouth" but he will "curse inwardly."

A large portion of ambitious tenants and naturally good farmers lack working capital, which is a handicap. Others, who are splendid workers and savers of money when under the direction of others, are failures when they attempt to manage for themselves and direct the labor of others. I have had a number of such in my employ, both before and after their failure as tenants or renters. Executive ability is one of the rarest qualities.

Certain it is that wherever our present unorganized tenant system obtains, there we find land values low because farms are unproductive and ill-kept, and the neighborhood undesirable for permanent residence. If tenant farming is to be a success, there must be a more liberal policy on the part of the owner, a longer lease at the outset with a recognition and compensation — in case of annulment — for improvements and increased soil fertility. Such would insure a better, more permanent class of tenants, and would result in an improvement, not a deterioration, of the land. I have doubts that we are ready for such a system in this country.

CONCLUSION

I have endeavored to set forth the fundamentals of successful farm management from the standpoint of labor, and the different plans of farm operation, and have made such suggestions as experience and observation have taught me are practical. In this, as in every other undertaking, we must study facts, and in the light of them each must work out his individual problems.

I should feel that I had failed in my duty to the agriculture and citizenship of the state, did I conclude without at least an attempt to impress on your minds and hearts the realization and importance of the fact that farming is more than a business or a means of livelihood. In a profession or a mercantile life, success or failure is largely an individual matter; in farming, one's weal or woe is bound up in the warp or woof of a community's welfare. A run-down and depleted farm without a citizen farmer is like a crumbling stone in the foundation of a structure. Multiply them to a very small extent, and the speedy collapse of the whole follows.

FIG. 6.—HOME ON A PRODUCTIVE FARM IN NEW YORK.

A productive farm and a resident farmer alive to his duty to the community, is a factor in the life of the commonwealth second to no other.

Careful study of the history of nations from long before the Christian era shows that their days of real prosperity and greatest influence have been when the lands were in small holdings, operated by an intelligent yeomanry, equally ready to exercise themselves in civic or military duties for the welfare and preservation of the state and in those relating to the soil, the plant, and the animal. In this connection, I urge all of you to hear the concluding lecture of this course on March 30, by Dean Mann, on "The Duty of the Farmer to His Community."

Perhaps I can best epitomize my thoughts by quoting the words of Uncle Henry Wallace: "There are four factors on every farm — the land, the man, the crops, and the stock — and the most staple of these is the land." Another saying of his, which I have selected for the motto on the institute programs for the year is as follows:

"The biggest thing on the farm is not the land, nor the live stock, but the farm folk — the people who live on farms and out in the open country. Do you know that the biggest thing in life, whether in city or country, is to be just a fine, human being, interested in all things that interest human beings?"

PRACTICAL ORCHARDING — TREE FRUITS IN THE EAST

CHARLES S. WILSON, Albany, N. Y.
Commissioner of Agriculture

In presenting the subject of orchard management, I wish to discuss the topics of soils, planting plans, tillage and sod mulch, cover crops, fertilization, and pruning. Of necessity, a limited discussion must be brief as regards any one of these topics, and also the subject of orchard management would include a presentation of spraying fertilization. Since, however, little helpful information on spraying and fertilization can be condensed into a few minutes' discussion, I am omitting that part of orchard management entirely and confining myself to the topics first mentioned.

SOILS

The soil preferences of our prints may be outlined thus:

Apple — light clay loam, having clay subsoil.
Pear — light clay loam, porous clay subsoil.
Quince — heavy clay loam, well drained.
Cherry — warm, mellow, deep, sandy or gravelly loam, or light loam.
Plum — light clay loam; Japanese — light warm loam.
Peach — light sandy loam.

It should be remembered that, within any particular fruit, different varieties may vary as regards soil preference. In the case of the apple, for example, the Hubbardston prefers the lighter type of soil, whereas the Rhode Island prefers the heavier type; and in like manner other varities of apples, and also varities of other fruits, have a preference more or less limited.

PLANTING PLANS

In discussing the proper distance apart to set trees, three thoughts should have due consideration: First, the distance should be sufficient to insure abundance of light and free circulation of air; secondly, the distance should be sufficient to permit of convenience in tillage; and thirdly, the distance will depend upon the omission or use of fillers.

The designations that are given to the different systems employed by the practical orchardist fall generally under two headings: the square and its modification, the rectangular; and the hexagonal and its triangular modifications. The term "quincunx" is commonly used in speaking of planting plans, but that term in reality refers to a modification of the square or rectangular plan, in which a filler is placed in the center of the square formed by the permanent trees. A diagram of these systems follows:

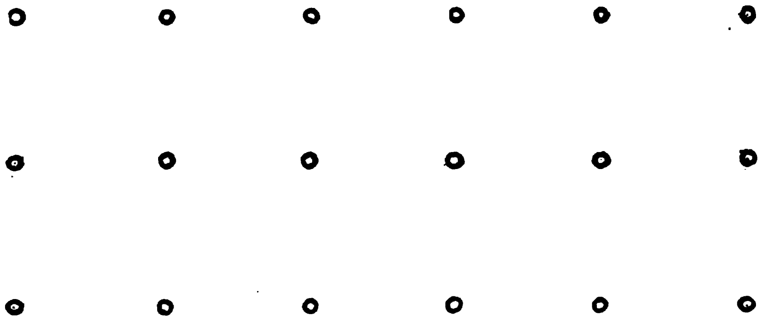

FIG. 7.—THE SQUARE METHOD OF PLANTING.

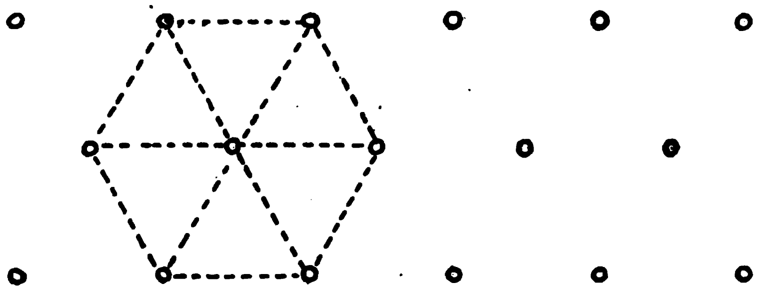

FIG 8.—THE HEXAGONAL METHOD OF PLANTING.

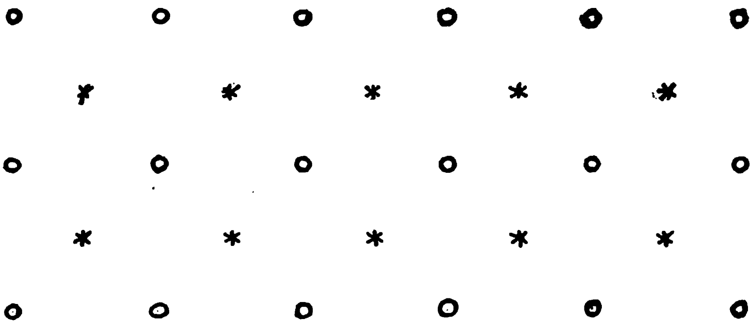

FIG. 9.— THE QUINCUNX, A MODIFICATION OF THE SQUARE.

The advantages of these different systems may be summed up thus: The square system is best where fillers are employed. On the other hand, the hexagonal is the more economical as regards space, where no fillers are used.

DISTANCE TO PLANT TREES

The convenient and common distances are given herewith:

Apples	30 to 50 feet
Apples, dwarf (Paradise stocks)	8 to 10 feet
Apples, dwarf (Doucin stocks)	12 to 25 feet
Pears	20 to 30 feet
Pears, dwarf	10 to 15 feet
Plums	16 to 20 feet
Peaches	16 to 20 feet
Cherries	16 to 25 feet
Apricots	16 to 20 feet
Quinces	8 to 14 feet
Pecans	35 to 40 feet
Grapes	8 to 10 feet
Currants	4 to 5 feet
Gooseberries	4 to 5 feet
Raspberries, black	3 to 6 feet
Raspberries, red	3 to 5 feet
Blackberries	4 to 7 to 6 x 8 feet
Strawberries	1 or 2 feet each way

SOIL MANAGEMENT

Two types of soil management are recognized throughout the state in commercial work: (a) tillage, (b) sod mulch.

Tillage

Practical orchardists are beginning to realize that thorough cultivation of the orchard, together with the judicious use of cover crops, is productive of the greatest profit. To outline the method, it may be said that the orchard is plowed in the spring in such a manner as to stir up the soil to its needed depth, without injuring the roots and the trunks of the trees. As a protection to the tree, it may be said that from one to three feet at the trunk need not be disturbed. After the soil has been turned by the plow it should be stirred frequently with the harrow until in good condition of tilth, and until about the middle of July, at which time a cover crop should be planted.

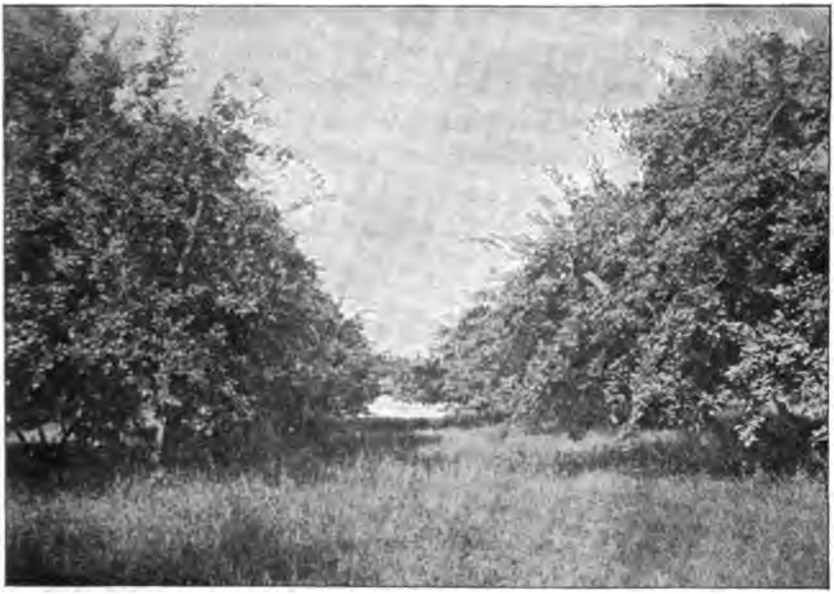

FIG. 10.— COVER CROP OF RED CLOVER IN A THIRTY-THREE-YEAR-OLD ORCHARD BELONGING TO MR. F. W. CORNWALL, PULTNEYVILLE, N. Y.

With these trees Mr. Cornwall gets very satisfactory annual crops. The practice of early plowing and early sowing of the cover crop is following here as with the young orchard. Mr. Cornwall thinks this is one of the important reasons for the excellent results he has secured with this orchard since he took charge of it.

The commercial orchards of this country have gone through interesting periods of development as regards the cultivation.

Formerly it was common to permit the orchard to grow up in grass and to allow farm animals to pasture. The animals generally admitted to the orchard were sheep and hogs, although occasionally cattle would be allowed. The idea of clean tillage of the orchard, however, grew and spread, until today it is generally recognized as the best method of care, provided the ground is tillable — that is, that it is not too stony or rocky, and that it is not too steep. Very careful experiments have been carried on, and also accurate information has been gathered from studies of the commercial orchards. In order to present to you the advantages of tillage as compared with sod, I submit herewith the results of the experiment carried on at the Geneva Experiment Station in an orchard 9½ acres in area, of middle age, on an average New York apple soil. The experiment was conducted by the Geneva Experiment Station under the direction of Professor Hedrick, and the results follow:

9½-ACRE EXPERIMENT — ½ TILLED AND ½ SOD

YEAR	Total yield in barrels		Net income	
	Sod	Tilled	Sod	Tilled
1904	615	591	$225	$185
1905	233	278	330	355
1906	210	531	155	392
1907	275	424	487	800
1908	325	722	353	723

In accord with this finding are the figures of a careful study or census of several hundred orchards in the counties of Niagara and Orleans. In the case of Orleans County two classifications are made, one including all orchards, and the other including only the orchards that are well cared for.

TILLED AND SOD ORCHARDS

(Five year average per acre)

TREATMENT	All orchards				Well-cared-for orchards	
	Niagara		Orleans		Orleans	
	Bushels	*Income*	*Bushels*	*Income*	*Bushels*	*Income*
1 Tilled 10 years or more...	280	$120	327	$182	337	$189
2 Tilled 5 years or more...	254	100	274	138	296	148
3 Tilled at least 3 years...	239	97	225	113	234	121
4 Sod at least 3 years.....	209	67	222	107	242	118
5 Sod 5 years or more.....	197	76	204	108	258	134
6 10 years or more........	195	75	176	87	232	117

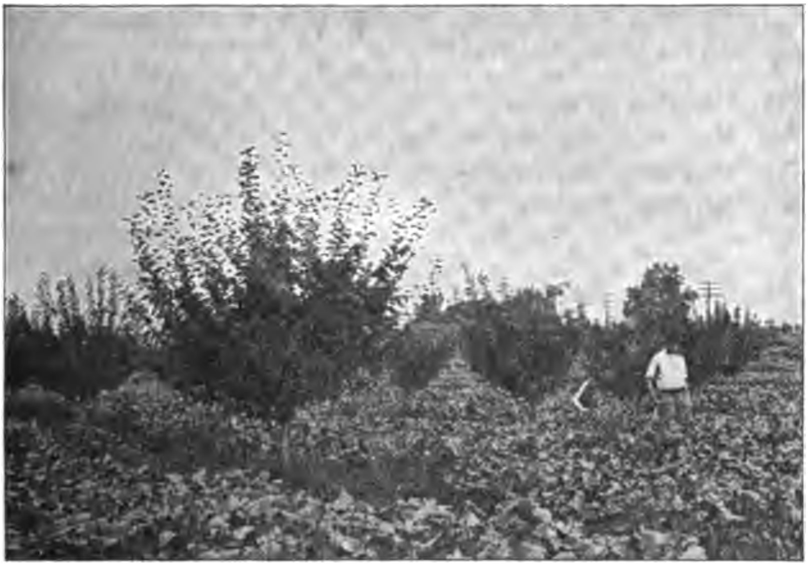

FIG. 11.—A YOUNG APPLE ORCHARD BELONGING TO THE DEPARTMENT OF POMOLOGY, NEW YORK STATE COLLEGE OF AGRICULTURE, ITHACA, N. Y., WITH DWARF ESSEX RAPE AS A COVER CROP.

In this heavy soil the rape has probably made more growth than could have been expected from any other crop.

Cover Crops.— The growing of a cover crop is really a part of good tillage. By pushing an orchard with thorough cultivation during the spring and early summer, heavy vegetative growth is obtained, which gives good size to the apple. After this intensive cultivation, and about the middle of July, a cover crop is planted in order to check the vegetative growth of the tree and hasten the maturity of the fruit, because it is desirable in all orchard work to secure well-matured product.

The advantages of cover crops may be summarized briefly as follows: The cover crop

1. Hastens maturity
2. Prevents leaching of plant food
3. Adds plant food
4. Adds humus
5. Protects roots

In choosing a cover crop, it is desirable to keep in mind the essential characters to obtain:

1. Covering for ground
2. Preferably winter over
3. Plants that catch easily
4. Nitrogen gatherer

Cover crops are commonly spoken of as leguminous or non-leguminous. The plants commonly used for this purpose, and the amounts per acre when used separately, are tabulated herewith:

LEGUMES	
Mammoth clover	15–20 pounds
Vetch	1 bushel
Crimson clover	15 pounds
Canada peas	2 bushels

NON-LEGUMES	
Buckwheat	1 bushel
Oats	2½–3 bushels
Rye	1½–2½ bushels
Barley	1½–2½ bushels
Turnips, Cowhorn	1–2 pounds
Rape, Dwarf Essex	9–10 pounds

In order to get the best results it is generally advisable to plant a mixture, since one plant seldom combines all the desirable characters of a crop. The Geneva Experiment Station advises the following for one acre:

Barley or oats	1 bushel
Winter vetch	15 pounds
Cowhorn turnips	½ pound

Sod Mulch

In some sections of New York State, and particularly those where tillage has not been convenient, a treatment of sod management has been practiced that is known commonly as "sod mulch." In the main it consists of permitting grass to grow in the orchard in abundance, and then cutting that crop once or twice during the season, permitting the harvested product to lie as it falls. It thus forms a mulch, generally not too thick to smother the growth of grass and usually of sufficient amount to add an abundance of plant food to the soil.

Where moisture is available in sufficient quantities so that the orchard at no time suffers because of drouth, this method gives good results. Usually the fruit is not so large in size as that from a carefully-tilled area, but generally it is higher in color, and the color, of course, is a very important factor in the sale of the fruit. Experiments indicate that fruit grown on sod mulch is a little earlier to mature.

VARITIES OF TREE FRUITS FOR THE HOME GARDEN

Apple
Yellow Transparent
Primate
Red Astrachan
Sweet Bough
Gravenstein
Twenty Ounce
McIntosh
Fall Pippin
Esopus
Yellow Bellflower
Rhode Island
Northern Spy
Red Canada
Baldwin
Roxbury

Apricot
Montgamet
Moorpark

Pear
Giffard
Clapp Favorite
Bartlett
Seckel
Bosc
Anjou
Sheldon
Winter Nelis

Quince
Orange

Plum
Abundance
Bradshaw
Reine Claude
Shropshire Damson
Italian Prune

Peach
Extra early
  Sneed or Mayflower
  Greensboro
Early
  Belle of Georgia
  Carman
  Early Crawford
  Mountain Rose
Medium early
  Yellow St. John
  Niagara
  Elberta
Late
  Smock
  Stevens Rareripe
  Salway

Cherry
Sweet
  Napoleon
  Black Tartarian
  Governor Wood
  Yellow Spanish
  Windsor
Sour
  May Duke
  Early Richmond
  Montmorency
  English Morello

COMMERCIAL AND HOME VARIETIES

1. Characters desired for:
   (a) Commercial orchard
   (b) Home orchard and garden

2. Apple.
   Brief history of varieties.
   Apple districts of United States (see Bul. 151, Bur. Plant Industry, U. S. Department of Agriculture).
   Apple districts of New York (see Bul. 275, Geneva Expt. Sta.).

THIRTY-FIVE IMPORTANT VARIETIES AND A BRIEF DESCRIPTION OF EACH

VARIETY	Size	Quality	Season	Age begins to bear
Alexander	9–10	5	5	4
Baldwin	7–8	6–7	8	8
Ben Davis	6–9	3–4	8	4
Black Gilliflower	5	4	6	6
Delicious	8–9	9–10	7	5
Esopus	6–8	9	8	7
Fall Pippin	7–9	9	5	7
Fameuse	4–5	9–10	5	5
Golden Russet	4–6	5–6	9	9
Gravenstein	8–9	8–9	3	7
Grimes	5–6	9–10	8	5
Hubbardston	7–8	8–9	8	4
Jonathan	5–6	8–9	8	5
Maiden Blush	5–6	5–6	4	4
McIntosh	6–7	10	6	5
Northern Spy	8–9	9–10	6	10
Oldenburg	5–6	4–5	2	2
Primate	5–6	9	1	5
Pumpkin Sweet	8–9	5–6	6	9
Red Astrachan	7–8	5–6	2	5
Red Canada	5–6	8–9	8	6
Rhode Island	8–9	7–8	8	5
Rome	8–9	6–7	6	4
Roxbury	5–6	6–7	8	8
Sutton	5–6	7–8	8	6
Sweet Winesap	5–6	6–7	8	6
Tolman	5–6	6–7	8	8
Tompkins King	8–9	8–9	8	5
Twenty Ounce	9–10	6–7	6	5
Wagener	6–7	7–8	8	2
Wealthy	6–7	6–7	8	2
Westfield	5–6	6–7	6	8
Yellow Bellflower	8–9	8–9	8	8
Yellow Newtown	7–8	9–10	9	5
Yellow Transparent	6–7	7–8	1	4

A STUDY OF VARIETIES FROM STANDPOINT OF VARIETIES FOR DIFFERENT USES

1.

Good permanent trees

Baldwin
Rhode Island
Northern Spy
Tompkins King
Twenty Ounce
Hubbardston
Alexander
Ben Davis
Rome
Esopus

2.

Good temporary trees — Fillers

McIntosh
Wealthy
Wagener
Rome
Ben Davis
Oldenburg
Jonathan
Alexander
Twenty Ounce
Hubbardston

3.

High in quality

McIntosh
Fameuse
Esopus
Northern Spy
Newtown
Wagener
Gravenstein
Red Canada
Tompkins King
Grimes
Hubbardston
Baldwin
Rhode Island
Tolman
Twenty Ounce

4.

Medium to poor in quality

Ben Davis
Oldenburg
Rome
Roxbury
Gano
Black Ben Davis
Arkansas Black
Gilliflower

5.

General market apples— Commercial

Baldwin
Ben Davis
Hubbardston
Gilliflower
Northern Spy
Tompkins King
Rome
Oldenburg
Alexander
Twenty Ounce

6.

Dessert or fancy — box

McIntosh
Northern Spy
Fameuse
Wagener
Grimes
Newtown
Red Canada
Tompkins King
Sutton
Hubbardston
Esopus

7.

Good hardy stock

Northern Spy
Tolman
Baldwin
Ben Davis
Boiken

8.

Poor, rather weak growers

King
Twenty Ounce
Esopus
Hubbardston
Grimes
Sutton
Red Canada

9.

Home cooking

Red Astrachan
Twenty Ounce
Rhode Island
Baldwin
Roxbury

10.

Baking

Sweet Bough
Sweet Winesap
Lee Sweet
Jacob Sweet
Bailey Sweet
Lady Sweet
Williams
Sweet Greening
Pumpkin Sweet
Rhode Island

11.

Eating

Yellow Transparent
Primate
Red Astrachan
Dyer
McIntosh
Esopus
Northern Spy
Douse
Red Canada

ORCHARDING IN CONNECTION WITH MIXED FARMING

EDWARD VAN ALSTYNE, Kinderhook, N. Y.
Director of Farmers' Institutes

Like all questions, this subject has two sides. The exclusive orchardist will say in effect with Paul, "This one thing I do" — the idea being that by giving attention entirely to one thing he becomes more thoroughly a master of it. There being no other crop to interfere, he is able to carry on his orchard operations at just the right time and in the best way. He will further say that only for a portion of the year is his business exacting; after his fruit is gathered and marketed, he has a long season for recreation.

While there is some truth in a man's likelihood of becoming more proficient as a specialist, he will also become more narrow. As a matter of fact, only on farms of a very limited area is it possible for one to devote himself to fruit alone. Only a few such men have made a financial success, when they have combined bush and tree fruits; usually the business is too small to be really profitable. My observation has been that when a large area is devoted to fruit alone the work is not so well done as when there is a diversity of interests. The time when most orchard operations can be carried on for best results is limited; when the amount of such operations are multiplied, the difficulty of getting them done in time is correspondingly increased.

The second reason: a long season for recreation is particularly attractive to the man who does not mean to make farming a real business. Let me pause at this point to state clearly that while I respect such as individuals, I consider them an unimportant factor in real agriculture. My heart and my desire goes out to him who would make farming a real business, and who desires to put into it the best of his faculties, as must one who would be a success in any profession or calling — not one who plays with them. I propose to treat this subject wholly from a business standpoint, and shall take up in order the unwisdom of deepening on one crop; overhead charges; labor; fertility; proper combination of crops and fruit. By way of illustration I shall sketch my own farm practice, built on forty years of practical economic experience.

UNWISDOM OF DEPENDING ON ONE CROP

The wise man said, "In the morning sow thy seed and in the evening withhold not thy hand, for thou canst not tell which will prosper." Evidently his thought was that the chances of success increased with diverse sowings. His philosophy is as sound today as in "ye olden time."

I never knew a season when all crops failed to yield their increase, and seldom have I known a time when one or more crops were not adversely affected by climatic conditions. I have seen an entire fruit crop blotted out in a night by an untimely frost and others reduced below the point of profit from the same cause, or by prolonged cold or wet, excessive heat, summer hail, or autumn gale. The interest on the investment must always be met. The cash and labor expended on an orchard in the way of spray material and its application, as well as the care of the soil, is always great, and in lean years has swamped more than one man without extra capital to tide him over. There have been years — and I look for them more frequently in the future — when prices are below the cost of production; when the larger the area is, the greater is the loss.

My opportunity for studying cropping systems in this and other states has been large. I bear witness that no matter how fertile the soil, or how well adapted to the crop, or how favorably situated as to markets, the farms and sections which are least prosperous for a long period are those where only one line is followed, be it dairy, hay, potatoes, grapes, hops, or apples or other fruit. Farm surveys made by Cornell University and farm bureaus bear like witness. It is not a fact that, as is often stated, the region along the shore of Lake Ontario is entirely devoted to fruit. On most of the fruit farms there is grown considerable wheat, beans, cabbage, canning factory products, and — where the farms contain muck bottoms — lettuce and celery. Not a few sheep are kept, and many more are fed during the winter, as are beef cattle. Dairying is also on the increase. In no part of the state have there been so many silos erected during the past three years as in this section.

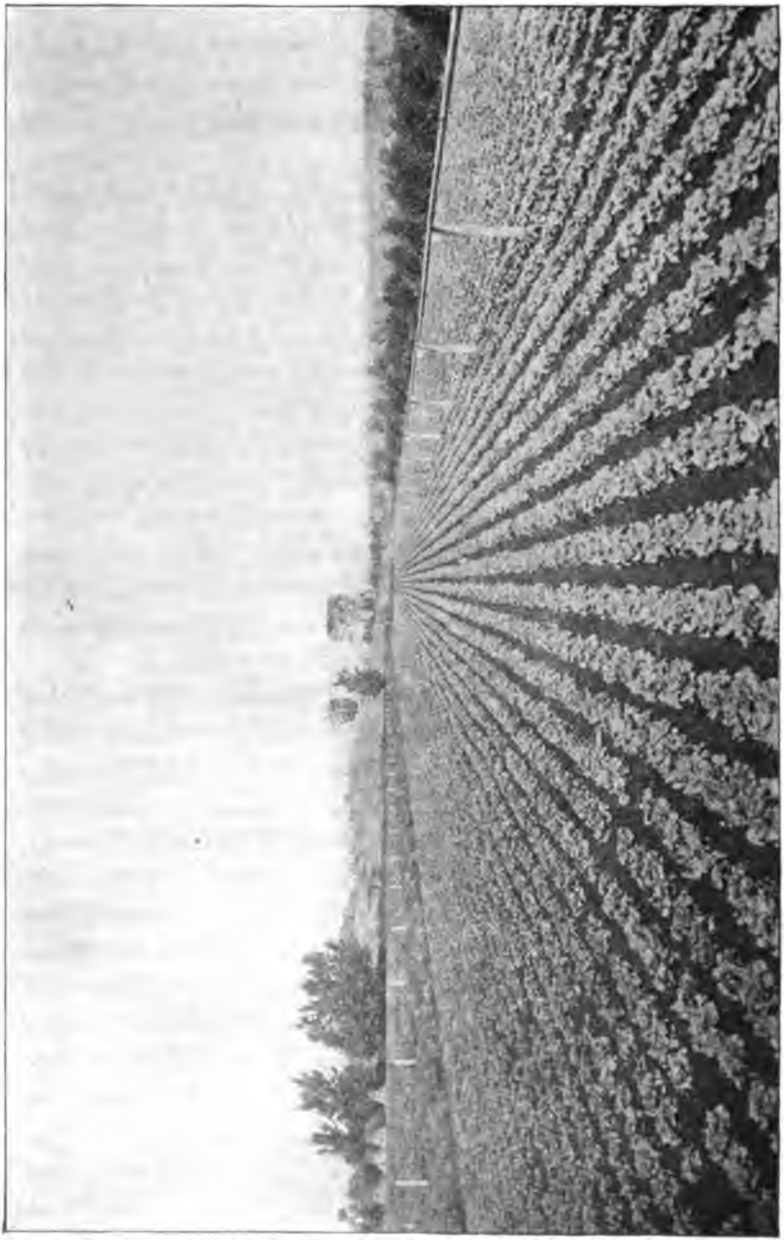

FIG. 12.—LETTUCE GROWN ON MUCK LAND.

OVERHEAD CHARGES

Most overhead charges, such as houses, buildings, and equipment, are as great on a small as on a large farm. On most farms only a portion of the land is suitable for fruit. Teams must be kept and it is economy to provide as much as possible of what they need from the farm. There must be a certain amount of machinery not necessarily confined to orchard uses, the charges on which are materially reduced if they can be employed in growing other crops than fruit; for example, the gas engine can cut fodder and pump water, in addition to running the spray pump. The tractor — an expensive tool at best — is rapidly becoming a necessity and it is much more expensive if it is used only in the orchard. When employed to plow and till the land for other crops, to draw the binder and other heavy machinery, with a belt to drive the silage cutter and other machines, the more constant use makes the overhead charges proportionately lighter.

One of the most successful growers in western New York publicly stated not long since that when he grew fruit alone, his cost for horse labor was 27 cents an hour; after he had added alfalfa and kept his teams employed more of the time the cost was reduced to 17 cents.

LABOR

As the competition between the farm and the shop for labor becomes more keen, with a scantily supplied labor market, the difficulty in securing help on the farm is each year more apparent. To obtain and retain the kind of labor necessary to carry on our farm operations with tranquillity, there must be steady employment for enough men to control the situation by the aid of modern machinery.

Only to a slight degree is this possible on an exclusive fruit farm. Where there is a diversity of crops, considerable labor can profitably be employed during the entire year. Month or steady labor is not only more satisfactory, but cheaper, when it can be profitably employed, than labor by the day or transient labor. This I will endeavor to exemplify in the outline of my own practice.

FERTILITY

This is a most important item, the maintenance and increase of which are the first essentials of a good farmer. Careful experiments have demonstrated that only in exceptional cases is lime or commercial fertilizer profitable directly to the trees. The much-heralded cover crops are expensive, even when one can grow enough of them to be worth while. Stable manure is always in evidence. Purchased from the city it is expensive, and too frequently such should be labeled: "Ichabod [its glory-plant food] has departed."

Made on the farm without cost, and applied in the fullness of its strength, manure combines economy and virtue — two most desirable graces. This is particularly valuable for the growing orchard. By its aid the land between the trees can be profitably cropped, and not a little of the forage to make the manure can thus be grown. This is why western New York orchardists are building silos, sowing alfalfa and clover, and feeding stock. There is a decided contrast between the orchards on such farms and those without live stock. The latter, like Cassius, have "a lean and hungry look."

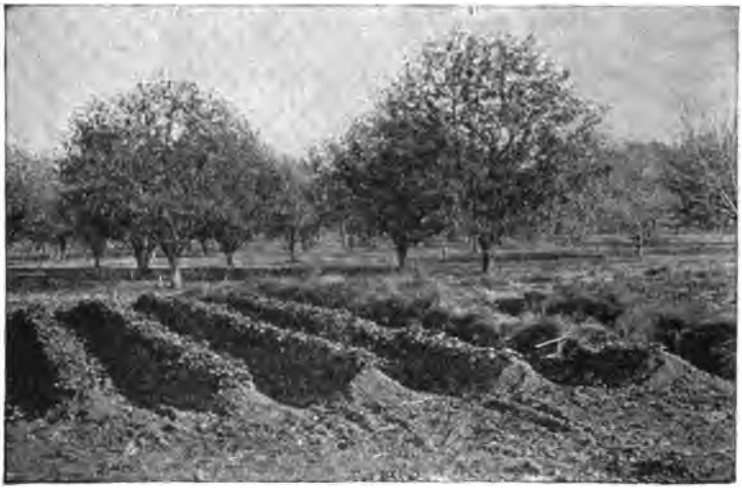

FIG. 13.— CELERY IN ORCHARD.

PROPER COMBINATION OF FRUITS AND CROPS

In determining a proper combination, much will depend on the character of the farm and its location. It never pays as a business proposition to grow a crop on land not naturally adapted to it — as, for instance, potatoes on heavy clay, or hay on light sand.

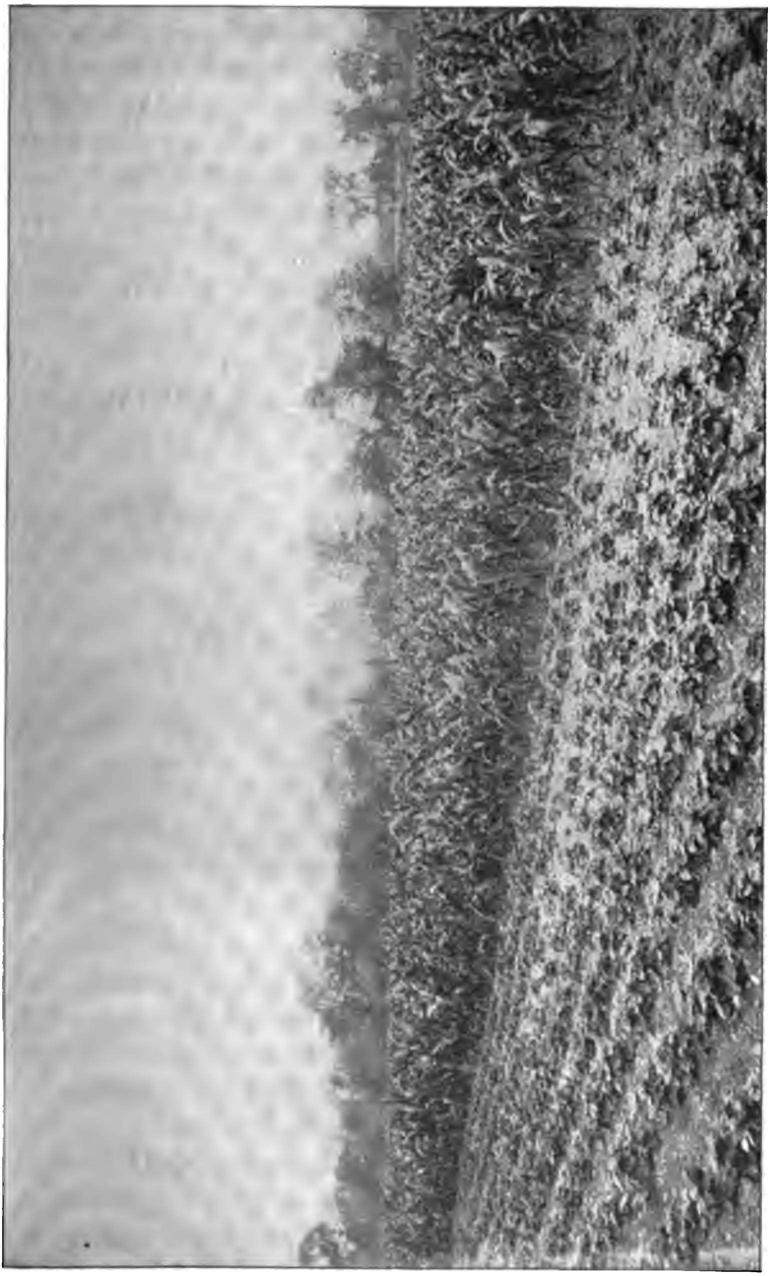

FIG. 14.—BEANS AND CORN ON NEW YORK FRUIT FARM.

Rarely, if ever, is it wise to grow a crop, however well it may be adapted to the soil, where such is not generally grown. In my own section much rye is raised. There is a market for the straw; there is machinery which threshes it without breaking, and ties it in bundles and presses by proper baling; there are local flour mills competing to buy the grain. Not long ago I was in another county where a man had sixty acres of excellent rye. There was no other crop of any size within a hundred miles. It could not be threshed well or cheaply. A distant market had to be found for the grain, and there was none for the straw. My section no longer grows much wheat, although there is much land which will produce good crops, for there is not a wheat flour mill within 200 miles.

FIG. 15.— STOCK AT PASTURE ON A NEW YORK FRUIT FARM.

So far as the man's ability is concerned, I am one of those who believe a real man can do anything he sets his mind to, and I have little patience with him who says, "I can't succeed with that because I don't like it." Nonsense!

Another very important thing is to grow crops which will supplement one another and where, so far as possible, the labor will not be needed on more than one at the same time.

Dairying goes well with fruit growing, since the time spent in caring for the cows during the first and last hours of the day cannot be so well employed in the orchard. The manure made from the dairy applied to the trees is in itself a substantial profit. More cows should be milked in winter when there is less to do in the orchard. Raising sheep or fattening cattle go particularly well with fruit growing, but poultry not so well, as they need more constant attention.

Hay is another excellent crop to produce with orcharding, as the harvesting is done at a time when there is least to do in the orchard. After the crop is secured it can be marketed in winter, thus affording work for men and teams. Grain growing does not fit in quite so well as hay, for the work of seeding comes at a time when there are apt to be demands for the harvesting of fruit.

Potato growing on an extended scale does not combine so well with orcharding for the following reasons: 1. Preparation of the soil and planting the crop is contemporary with cultivation and spraying of the orchard. 2. Potatoes must be sprayed thoroughly and at an accepted time. 3. Their harvesting interferes with that of apples.

The above are suggestive, illustrating what I am attempting to make clear, and with these general principles in mind each one must determine what crops best suit his special conditions. As already intimated, the amount of orchard and the adaptability of land to crops must be controlling factors.

THE SPEAKER'S SYSTEM

I submit the following, not because it is best or one for everyone to follow, but because it is illustrative and is the evolution of generations of farmers dependent on the land for a livelihood:

I have in the home farm 220 acres, practically all tillable except that occupied by a good-sized stream. One hundred acres are bottom land not at all adapted to fruit, but excellent for hay and corn. Some thirty or more acres are slightly rolling, naturally wet, and are underdrained — good land for hay and grain. The balance is a loam, well adapted to fruit, potatoes, or winter grain.

I keep a dairy of twenty-five milch cows and about an equal number of young stock. Only about twenty acres are used exclusively for pasture, the dairy being fed at least half their feed in summer in the stable, some of which is grown between the rows of trees. We now depend chiefly on silage corn. The young stock are pastured in the old, high-headed orchards, now rapidly declining.

We keep the bottom lands in hay as long as they will cut profitable crops. Usually we sell about fifty tons of timothy hay. After breaking these lands, corn is grown one year, followed by oats, after which the land is reseeded without a grain crop. The same system is followed with the clay, except that the land is not left so long to grass and we seed with a rye crop. The oats and straw are needed on the farm.

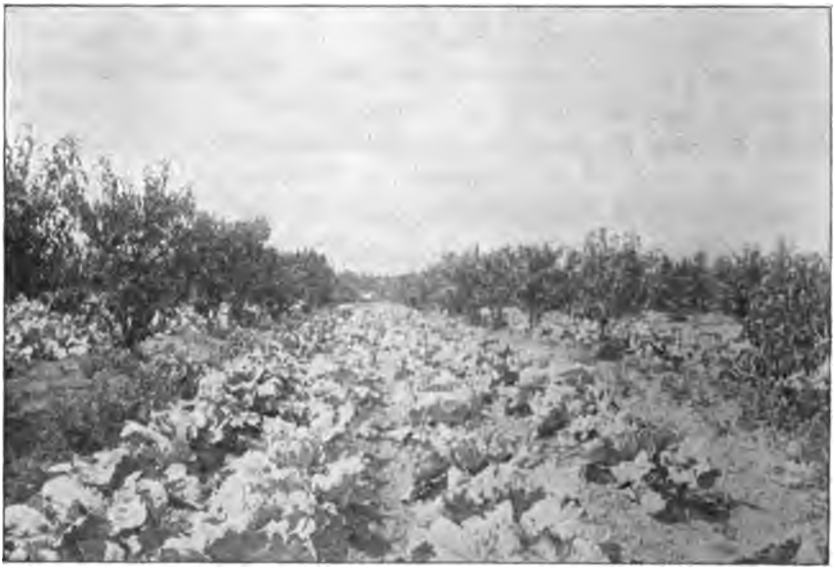

FIG. 16.— CABBAGE AND POTATOES GROWN BETWEEN TREES IN ORCHARD.

The milk from the dairy is made into cream, and marketed in the Hudson River towns. The skim milk is fed to calves and swine. Of the latter we keep four brood sows, a male, and their increase — all pure-bred — and from the sale of stock we get a considerable revenue. The same is true of the increase from the cattle. The swine also have the run of the old orchards.

I have about fifty acres of orchard, including fifteen acres of the old trees referred to. The balance of the trees are from three to twenty-two years old. Between the rows of the growing trees — until the trees are large enough to occupy and give a sufficient revenue from the land — we raise potatoes, beans, corn, and oats and peas, cut green, the two first named being money or cash crops.

The balance of the loam land has a rotation of corn — most of it for the silo. We grow enough hill corn for our swine, horses, and poultry — from 30 to 35 acres a year. The silage corn is followed by rye without breaking the land, and the following year it is plowed, resowed with rye, and seeded with clover and timothy. It is then in grass one year. This means about 30 tons of straw to sell and some 600 bushels of grain.

Formerly I grew a large acreage of potatoes but I was obliged to omit the crop on account of increased spraying of both potatoes and orchards and inability to get enough help to harvest both potatoes and fruit. Until three years ago I kept a flock of sheep, from which I raised winter lambs. The burning of a large barn, and the demands of an increasing number of young stock, particularly for pasture, necessitated selling the sheep, much to my regret. Previously I had the young stock pastured on cheap land at a low rate, which I no longer dared to do after my stock was tuberculin-tested.

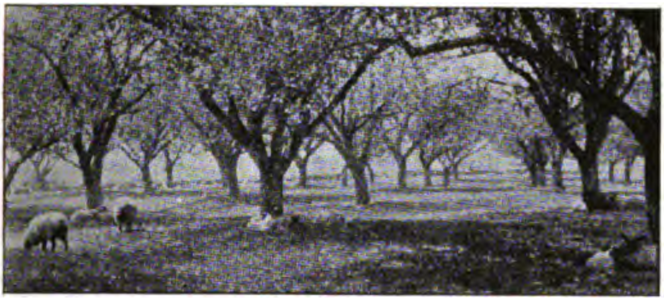

FIG. 17.— SHEEP IN ORCHARD ON NEW YORK FARM.

I need at least five horses, two of which are brood mares, from which I raise a colt or two a year. This more than supplies my need for teams and gives an occasional horse to sell. One team will probably be supplanted this spring by a tractor.

I keep five men for eight months and three the balance of the year. In addition, there must be extra help in harvest, silo filling, pressing, threshing, and fruit picking and packing. By having a number of varieties of apples ripening in succession, I prolong the apple harvest from August to November.

The income from the live stock is pretty nearly a fixture. The returns from rye, straw, and hay vary somewhat with the season and prices, but on the whole are stable and dependable. The income from the orchard varies greatly, as much as $3,000 annually.

From these various sources I am certain of an income on which to live and pay for my help, fertilizer, the purchased food that we need to supplement that grown on the farm, repairs, upkeep, and the many incidental expenses which, taken from the proceeds of a single crop, often reduce it to such an extent as to leave nothing over for the proverbial rainy day.

It will have been observed that my aim is to make the farm largely self-supporting, and at the same time increase its fertility. By the plan of stabling the cattle a good share of the time, we save the bulk of our manure and have enough to give a moderate dressing over all the land at least once in the rotation.

As a whole, this plan works out well, although orchard cultivation is sometimes not done quite when it should be because of corn planting or harvest. My busiest time is in September, when fall apples and silo filling, with grain and grass seeding, sometimes overlap.

This spring I am turning the active operation of the farm over to my oldest son. Naturally, through the years I have had his welfare at heart. I fear I could not go out of life with a contented mind did I not feel certain that the plan I have followed on the land which five generations of my forebears have tilled would continue to maintain it and those who shall follow me. Hence, I am handing over a system of mixed farming, rather than more extensive orcharding, because I believe it will maintain the fertility of the soil and meet changing conditions for another 250 years, and thus — which is more important — develop farmers each of whom shall take a man's part in the world.

Finally, I know that it takes a bigger, broader man to carry out a system such as I have outlined than one centering about a single crop. To develop this best crop of produce from any farm, I assure you, is always uppermost in my mind.

PRODUCTION OF TIMOTHY HAY

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Timothy hay is easily the most important crop in New York State. The total value of all agricultural products in New York for the census year, 1909, was $209,168,000. Of this total, about one-third ($77,360,000) was the value of hay and forage. This estimate, however, includes corn and silage and other coarse forage. The comparative value of timothy and some of the other cultivated crops can be seen by the following table:

TIMOTHY IN NEW YORK, 1909

Crop	Acres harvested	Value	Average per acre
Timothy	1,078,000	$16,944,000	$15 70
Timothy & clover (two-thirds timothy)	2,935,000	42,530,000	14 40
Clover	87,000	1,413,000	16 20
Total	4,100,000	$60,887,000	$14 85
Probable value of timothy	....	45,000,000	....
Corn	512,000	$11,439,000	$22 32
Oats	1,302,000	17,977,000	13 80
Wheat	289,000	7,175,000	24 82
Total	2,103,000	$36,591,000	$17 40

It will be seen from this that the probable value of timothy was about $45,000,000 in 1909, somewhat more than the combined value of all our cereal crop. The hay production is the most reliable agricultural industry in the state, and as long as there is a fair market price for hay it will continue to be our most important agricultural product. It may be added that about one-third of the state is in pasture; hence, putting the pasture and hay land together, about three-fourths of the cultivated land is in grass crops, either hay or pasture. The growing of a good grass crop, then, as hay or pasture, is probably the most important agricultural problem confronting the state.

GRASS IN ROTATIONS

On almost every farm some manure and fertilizer is used. As an illustration of where the manure and where the fertilizer has generally been found most profitable in its application to grain and grass crops, the two following typical rotations may be submitted:

YEAR IN ROTATION	ROTATION NO. 1	ROTATION NO. 2
1	Corn (manure)	Corn (manure).
2	Oats	Oats.
3	Wheat (fertilizer)	Wheat (fertilizer).
4	Clover and grass	Clover and grass.
5		Grass (fertilizer).
6		Grass (fertilizer)

In most parts of the state wheat is the first crop on which a commercial fertilizer is used, but there is an increasing tendency to apply commercial fertilizer to grass land when it is left down for more than one year. On many farms there is no place where fertilizer could be applied to better advantage, not only because it would increase the grass crop, but because it has been found that the grain crop following a sod that has been well fertilized is always much larger than on an unfertilized sod.

FERTILIZING AN OLD MEADOW

As an illustration of what fertilizer will do on fairly good grass land, we may cite the results on about eight acres secured by the New York State College of Agriculture in 1909. This meadow had been in timothy for about three years at that time and produced an average yield of 1.25 tons per acre. Beginning in 1910, it was top-dressed with fertilizer each spring and produced an average yield of 2.96 tons per acre, as shown in the following table:

RESULTS IN FERTILIZING TIMOTHY — OLD MEADOW

1907–08–09 Average Yield, 1.25 tons.

After Fertilized

1910	**3.34 tons**
1911	**2.62 tons**
1912	**3.00 tons**
1913	**2.86 tons**
Average	**2.96 tons**
Net gain	**1.71 tons**
At $12 per ton	**$20.52**

The above table shows an average gain of 1.71 tons per acre, which at $12 per ton would be an average gain of $20.52 per year.

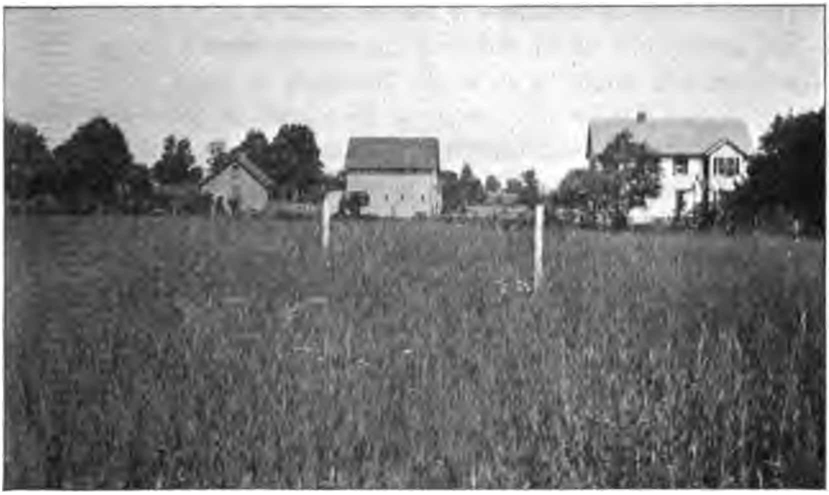

FIG. 18.— TIMOTHY MEADOW, WHERE 150 POUNDS OF NITRATE OF SODA AN ACRE WAS USED ABOUT MAY 1.

Where nitrate was used, the grass was three feet high and very thick, lodging in spots; where nitrate was not used, grass was two feet high and thin.

The amount of fertilizer used in the above case would cost annually about $6 per acre, which gave a return of about $3 for each dollar's worth of fertilizer used. This return is reasonable to expect on good, productive hay land.

KIND OF MEADOW TO FERTILIZE

Not all land responds to fertilizers. For example, some land is so deficient in lime that lime is the principal limiting factor. In such a case, as a rule, we cannot expect profitable returns from fertilizers until the acidity has been corrected by the use of lime. In some cases drainage is the most limiting factor. The land must have adequate drainage before you can expect fertilizers to return profit. In other cases, old meadows have a very poor stand of grass. The vegetation is largely made up of weeds or small grasses, such as Canada blue grass, which will not produce a hay crop. As a general rule, before we can expect profits from fertilizing meadows, we must make sure that our meadow is not seriously lacking in lime, that it has fair drainage, and that it has a good stand of grass, preferably timothy.

KIND OF FERTILIZER TO USE

The fertilizer on meadows is usually applied as a top-dressing in the spring just about the time the spring growth starts. In New York this would be about the last week of April. The fertilizer, in order to be effective, must be soluble in order that the first rains following will carry the fertilizer into the soil. There are several fertilizers available for plowing into the soil, but which are so nearly insoluble that they would not be of much use when applied to the surface as a top-dressing. A few of the standard soluble and insoluble fertilizers are listed below as an illustration.

FERTILIZERS

Soluble	*Insoluble*
Sodium nitrate	Cottonseed meal
Acid phosphate	Rock phosphate
Acid bone	Tankage
Muriate potash	Raw bone
Barnyard manure	

The present war situation has made it almost impossible to secure potash fertilizers, and it has also made the price of nitrate fertilizers so high that they are practically out of the question. Assuming, however, that normal times will again return, we should again be able to use the fertilizers which have been worked out as most satisfactory for grasses. Two formulas for top-dressing grass alone, which have been very satisfactory in the past, are shown below:

FORMULA NO. 1

Fertilizer (9–4–7)	*Pounds*
Sodium nitrate	200
Acid phosphate	100
Muriate potash	50
Total	350

Cost, $6.50.*

FORMULA NO. 2

Fertilizer (7–7–7)	*Pounds*
Sodium nitrate	150
Acid phosphate	150
Muriate potash	50
Total	350

Cost, $5.50.

AMOUNT TO USE

The above formula shows the maximum amount to use on one acre. The most profitable amount, however, will have to be determined more or less by experience in each case. In general, it is best to use about half the above amount, or 175 pounds to the acre, but one should experiment more or less with the maximum amount to determine whether the land responds sufficiently to fertilization to pay for the heavier application. As a general rule, the better and more profitable the land for grass, the larger the amount of fertilizer that can be used with profit.

RESIDUAL EFFECTS

One of the most important considerations in fertilizing meadows is the fact that, not only is the grass improved, but when the sod is plowed up it is found to be in a much more highly productive state for grain crops than unfertilized grass land. As an illustration, the following data is taken from one of our six-year rotations in which the grass is laid down for three years, followed by grain for three years, the grain crops being corn, oats, and wheat. During the three years it is in grass, applications of fertilizer and manure are made. The following data shows the yield of grass as a result of the use of fertilizer and manure, and also the yield of corn the first year on the sod land:

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* This price is based on normal prices, before the war.

TREATMENT	YIELD OF HAY, 3-YEAR AVERAGE	YIELD OF CORN FOLLOWING	INCREASE
	Pounds	Bushels	Bushels
None	2,901	30.4	....
Fertilizer	6,650	56.8	26.4
Manure	6,193	67.5	37.1

In this case no fertilizer or manure was applied to the corn crop, but we obtained an increase of 26.4 bushels to the acre where corn followed fertilized plots, and 37.1 bushels per acre where the grass land had been top-dressed with manure twice during the three years.

ROTATION OF CROPS

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By rotation of crops is meant the recurrence of a definite sequence of crops through a definite term of years on each of the tilled fields of the farm. Following is a diagram that will illustrate a five-year or five-crop rotation on five fields of equal area:

A 1917 Corn 1918 Small grain 1919 Clover 1920 Timothy 1921 Timothy 1922 Corn, etc.	B 1917 Small grain 1918 Clover 1919 Timothy 1920 Timothy 1921 Corn 1922 Small grain, etc.	C 1917 Clover 1918 Timothy 1919 Timothy 1920 Corn 1921 Small grain 1922 Clover, etc.
D 1917 Timothy 1918 Timothy 1919 Corn 1920 Small grain 1921 Clover 1922 Timothy, etc.	E 1917 Timothy 1918 Corn 1919 Small grain 1920 Clover 1921 Timothy 1922 Timothy, etc.	F House Barns Garden Orchard

The rotation idea is thus seen to have a double meaning in that on a given field there occurs a rotation of crops which is also the crop scheme for the farm for every year. The farm fields are not necessarily devoted to one rotation, for on a well-managed farm there are often in operation two or more rotation plans. The rotation scheme may include all manner of annual and short-term perennial crops, and may include intensive cropping, such as two or more crops per field per year.

Rotation of crops is widely practiced by farmers for many reasons, which are summarized in the three following:

1. It may well mean profitable farming.
2. It may well mean maintained or improved productivity of the soil.
3. It means, when followed systematically, regularly diversified cropping and yields.

PROFITABLE FARMING

That the first point is likely to follow the use of a well-conceived rotation is shown in the result obtained by the Ohio Agricultural Experiment Station, working with a five-year rotation of corn, oats, wheat, clover, grass, through a period of eighteen years:

FIG. 19.— SILAGE CORN, INCREASING IN FAVOR IN THE FRUIT DISTRICTS.

With Rotation						
Treatment for each 5-year period	CORN		OATS		WHEAT	
	First 5 yrs.*	Last 5 yrs.*	First 5 yrs.*	Last 5 yrs.*	First 5 yrs.*	Last 5 yrs.*
	Bushels	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*
Unfertilized	31	26	30	29	8	14
Nitrogen...... 38 lbs. Phosphorus.... 30 lbs. Potassium.....108 lbs.	36	45	38	48	14	28
Manure.......8 tons	40	47	32	39	12	26
No Rotation — Continuous Cropping						
Treatment for each year						
Unfertilized	26	8	28	15	10	6
Nitrogen...... 24 lbs Phosphorus.... 10 lbs. Potassium..... 40 lbs.	45	35	42	24	20	22
Manure..... 12 5 tons	37	13	31	23	13	17

*Yields are annual averages for period per acre.

FIG. 20.—OAT FIELD IN MADISON COUNTY.

The significance of the data above is as follows: (a) The corn in rotation, unfertilized, out-yielded the unrotated, unfertilized corn by 225 per cent. (b) The rotated corn with complete fertilizer costing $16.78 per acre for each 5-year period out-yielded the unrotated corn, fertilized with a complete fertilizer worth $40.50 by 28.6 per cent. (c) The rotated corn fertilized with 8 tons of manure for each 5-year period out-yielded the unrotated corn fertilized with 12.5 tons of manure by 161 per cent.

(2) The second point, namely, that a rotation scheme may maintain or increase the productivity of the soil, is partially, though inadequately, shown by this Ohio experiment. The five-year rotation during the eighteen years did not maintain productivity for the corn and oats crops, but improved it for wheat, as shown by an increase in yield of 75 per cent. (The land and seasons in the first five-year period were probably unsuited to giving a fair basis for judging wheat in rotation.) The unrotated corn showed a falling off in yields of over two-thirds, the oats of about one-half, and wheat of over one-third. Hence we can conclude that through a long period a rotation containing a hoed crop, two drilled small grains, a legume, and a grass, will more nearly approximate the maintenance of productivity than will

FIG. 21.— TYPICAL WHEAT FIELD.

no rotation, but that this rotation alone will not maintain productivity.

Rotation of crops supplemented by a rational system of fertilizing and liming, however, will not only maintain production but increase it; whereas, nonrotation of crops — with the exception of wheat, which is known to withstand continuous cropping better than the other cereals,— even under an expensive fertilization plan, will not maintain productivity, resulting shortly in reduced and unprofitable yields.

FIG. 22.— RED CLOVER — THE FARMERS' STANDBY.

(3) Rotation of crops means regular areas and, with seasonal variations, regular yields of a definite series of crops. On this basis farm help, machinery, stock, buildings, and marketing can be planned. Without rotation unneccesary irregularity, confusion, and lean years are probable.

Some of the reasons why rotation of crops results generally in increasing profits and soil productivity are: (a) It tends to control insect, bacterial, fungous, and weed pests of the crops in the rotation. (b) It tends to maintain a proper supply of wholesome organic matter in the soil. (c) It provides different types of root systems — some shallow-rooted, others deep; some fibrous, and others tap roots. (d) It introduces systematically a legume into the cropping scheme for each field, thereby claiming nitrogen from the air for the crops. (e) It introduces in a most fundamental way the cardinal idea of successful farming, namely, that the farm ventures constitute a systematic unity.

It is the opinion of the speaker that practical farmers do not take seriously enough the need for a well-conceived rotation scheme, and that, once decided, they do not put it into practice through a sufficiently long period to conclude as to its merits. Opportunism is often the finger of scorn pointed at farmers by business men of the city. Rotation of crops may be practiced by making the farmer his own competent " factory " manager.

COSTS AND PROFITS IN DAIRYING

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Milk is one of the most important of our agricultural products. There is no substitute for it, and it will always be in demand. Such proper adjustment as will encourage the dairy industry must and will be made. The consumer eventually will pay the producer a reasonable profit. The results of surveys and studies of cost estimates, however, indicate the existence of rather startling conditions.

In a great many localities surveys show an actual loss in dairying when all costs are included, still the dairymen usually are successful farmers, and dairy sections and dairy communities are almost without exception prosperous. This, of course, may be difficult for the consumer to understand. Dairymen who are making a special product and getting a special price for it are in most cases satisfied, but in those communities where conditions show the dairy industry to be unprofitable, there are several reasons why dairymen continue in the business:

1. On account of changed conditions some are producing milk at no profit or at a loss. An improved method of shipping milk may be a factor in this. A dairyman who lives near a city is able to sell his straw, stover, and other feeds at a higher price, and perhaps also his labor is high-priced. With improved facilities of transportation he is obliged to compete with a farmer who occupies cheaper land and who places low values on his coarse feeds.

2. There are those who are satisfied to produce milk at actual cost in order that they may get some return for labor that they could not use without the dairy. To illustrate — assume that there are two farmers, each with 160 acres of equally good land, one having 10 cows and the other none. Now we may suppose that the farmer with the 10 cows sells his milk at exactly the price that careful and accurate records show it to cost. Figuring

roughly that labor was charged at $30 per cow per year, the farmer with 10 cows would then have $300 more than his neighbor at the end of the year, for he would spend no more for his labor. In the summer his children are at home and do the milking, and during the winter it can be done by the farmer himself. He is therefore $300 better off at the end of the year than his neighbor. Some contend that this is a division of labor, others that it has nothing to do with the actual cost of milk. It is nevertheless one of the important reasons why some dairy farmers are apparently more prosperous than those on similar farms and without cows.

3. Some dairymen have land which can not be used for anything except pasture, or have stover or inferior hay and other feeds that can be utilized for milk production, but that could not well be marketed.

4. There are those who found the milk business profitable when feed, labor, and other expenses were cheaper; and, although their price for the product may not have advanced in the same proportion as cost, still they continue in the industry in the hope that they will eventually get a higher price for the milk.

5. With some farmers a few cows fit in well with the general farm scheme. To this class belong those who have a little pasture, those who want a certain quantity of manure for a particular crop, and those who want a certain small cash income throughout the year. It is the farmers with small herds, more than any others, who produce the bulk of the milk of this country, and keep the price low.

The above reasons are not given to justify low prices of milk, but rather to explain why some are producing milk although when all actual costs are counted the business does not show a profit.

The costs and credits incident to milk production are shown in the table below. Under conditions which include a particular size and kind of cow, producing 8,500 pounds of 4 per cent milk with feeds at stated prices, with a good system of management, and with a good barn well equipped for the production of high-grade milk, cost records will show the following as actual costs in the production of milk:

TOTAL COST

1. Feed	$75 29	
2. Labor	27 00	
3. Buildings	8 24	
4. Cattle	9 21	
5. Bedding	3 25	
6. Sire	3 51	
7. Miscellaneous expenses	24 25	
		$150 75

CREDITS

1. Calves	$3 00	
2. Manure	20 00	
		$23 00
Net cost per cow per year		$127 75

The average standard of production of these cows is assumed as 8,500 pounds per year, which was also the average production of the 985 Guernsey cows used in the Wisconsin test, upon which the data in this study are based. Figuring 2.15 pounds to the quart, the production is 3,441 quarts. Thus the cost of production per quart is about 3¾ cents. The cost of 100 pounds, therefore, is $1.50. The Sheffield farms, Slawson-Decker Company, New York,* one of the largest independent milk companies in the United States, announced its price schedule for milk as follows:

MONTH	1916	1915
April	$1 70	$1 75
May	1 40	1 40
June	1 40	1 40
July	1 60	1 50
August	1 75	1 65
September	1 80	1 75

This is for milk testing 4.5 per cent, which is one-half per cent less than the standard used herein in calculating feed cost. They, however, allow a premium of 4 cents per hundred pounds for each one-tenth per cent butter fat above 4.5 per cent. Five per cent milk would be paid for at a rate of 20 cents more per hundred. Still further premiums are offered for milk of Grade A. The winter prices are prevailingly higher, but the production then is less. The average price of milk of Grade A, testing 5 per cent, is $2 per hundred pounds in New York. In some sections this price is less.

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* New York Produce Review, American Creamery, p. 975.

It should be further pointed out that the prices for feeds are somewhat lower than prevail at the present time. At prevailing prices for feeds the costs would be increased to $90.49, and the total costs to $142.95, and the profit per cow may be determined as follows:

Sale price of 8,500 pounds of milk	$170 00
Cost of production of 8,500 pounds of milk	142 95
Profit per cow	$27 05

In a 20-cow dairy the profit for the year on this basis is $532.80, in addition to an income of 5 per cent for all capital used in the enterprise. The assumed total capital invested is about $9,000. When the disease risk to the animals is considered, the profit under these conditions is not great, though satisfactory.

For the standard herein, however, unusually high-producing cows were selected. The average production of the cows of the United States is only about 3,000 pounds. Animals of this sort present a very different outlook for the business. We may assume that cows of this standard are used to supply milk to the same market, that is, Grade A. We find the food for maintenance would be the same, and for 3,000 pounds of milk is as follows:

	Protein	Energy
Maintenance, 5 x 280=	140	6 x 280 = 1,680
3,000 pounds of milk, 962 x 3,000=	186	.36 x 3,000 = 1,080
Total amount needed	326	2,760
Supplied by hay	90.89	583.63
Supplied by silage	61.60	1,159.20
Total amount supplied	152.49	1,742.83
To be supplied by grain	173.51	1,017.17

A ration of a ratio of 1:6 would supply this need. Using the same feeds in slightly different proportions to give the needed balance of 1 to 6, the following amounts of feed would be required by cows of this production:

FEED REQUIRED WITH COSTS

1,680 pounds of hay, at $.80 per 100	$13 44
7,000 pounds of silage, at $.15 per 100	10 50
450 pounds of corn, at $1.00 per 100	4 50
300 pounds of dist. grains, at $1.50 per 100	4 50
300 pounds of bran, at $1.50 per 100	3 15
300 pounds of oats, at $1.10 per 100	3 30
Pasture for season, at $5.00	5 00
Total cost of feed for the year	$44 39

The cost for feed, therefore, would be $30.90 less per year. The cost of labor, buildings, and bedding, and miscellaneous expenses would be the same, while the cost of sires and cows would be decreased only by the initial cost of the latter, which would only decrease the cost per unit cow by a few cents. The cow would cost as much to raise, but if purchased could be obtained for a lower price. The total annual cost, then, to keep cows of this kind would be $97.26. The milk at the same price of $2 per hundred pounds would bring $60, which would make a loss of $37.26 per cow per year. This is what may be expected at present prices of feed and labor from cows that produce no more than the average cow of the United States, when a dairyman attempts to produce milk of good grade, in good barns, using full grain rations, and practicing year-round feeding.

A further analysis may be made. Let us assume that the cows are kept in a building worth only $1,000, that the cattle are kept on pasture and fed chiefly straw and stover during the winter, that the bedding could not be marketed, that much of the hay could not be sold at $16 per ton on account of being damaged by rain, that the equipment is relatively incomplete and inexpensive; also assume that the cows are fed less grain, producing most of the 3,000 pounds while on pasture, and only given stover, straw, and perhaps a little grain in the winter. The item of labor under this system would be less. Under these conditions the annual cost of keeping cows could be decreased to $60, or the sale price of the milk. Some dairymen would continue under these conditions for the pay of $27 per cow per year for labor.

An application of the formula warrants the following conclusions:

1. Under present prices of feed and labor a herd of high-producing cows will, when properly managed, return 5 per cent interest on the capital invested in a good plant, and an additional 5 per cent for services of the manager not included in regular labor charge.

2. The average cow of the United States does not produce enough milk to pay the cost of production when managed under the same conditions and equipped to produce high-grade milk.

3. Where the herd uses feeds that cannot be marketed, where a cheaper system of management is used, and where the cows are housed in cheaper buildings and given less care, they may pay the cost of production of milk.

4. Under some conditions, summer dairying would be more profitable than the all-year practice.

5. It does not pay to use intensive methods or winter grain feeding with low-producing cows.

6. The value of pasture for dairy cows has been underestimated.

MILK: A CHEAP FOOD*

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Milk is a cheap food. Furthermore, in any family dietary where the welfare of children as well as of adults is intelligently considered, it is almost a necessity.

The proof that milk is a cheap food is not in the price paid for the quart. Even at fifteen or twenty cents a quart, milk is a cheap source of certain nutritive substances always needed by the body, and particularly needed during the growth period.

There is an urgent need at this time for consumers, and particularly the housekeepers who plan the meals, to learn something of the nutritive value of foods. The increasing cost of many common foods leads to a temptation to reduce expenses by excluding those foods the prices of which seem prohibitive. This unconsidered method of banishing a food from the family board or of limiting the amount to be used may often prove harmless and conservative. It is, however, an altogether unsafe practice, because the food thus eliminated may be, in spite of its seemingly high cost, the cheapest possible source of some nutritive substance necessary to the health and welfare of the body.

A study of the value of milk as a food and the particular part it should play in the dietary will serve as an illustration of the method that should be followed in determining the right of any food to a place in the daily meals.

HOW TO STUDY THE COST OF A FOOD

The only fair way to estimate the real value and therefore the cost of a food is to determine, first, what the body needs from food; second, how the food under question meets these needs; and, finally, whether some other food may be used to replace it equally well and for less money. When a food is put to these tests, it may be discovered that, whereas it is expensive as a source of one of the nutrients needed by the body, it may prove to be the cheapest possible source of another. Final economy therefore

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*** Taken from Cornell Reading Course Bulletin, Lesson III, January, 1917.**

consists in using a food intelligently to supply that which it gives most abundantly and effectively and which cannot be replaced to better advantage by other foods. It is not necessarily a saving of money to discard a food because of the high price it commands. This will become evident when a careful comparative study of milk is made.

THE NEEDS OF THE BODY FOR FOOD

The needs of the body for food are three: first, for energy; second, for building material; and third, for body-regulating substances. All these needs must be met adequately before a healthy, well-nourished body will result. The value of a food to the body is measured by its ability to supply one or all of these needs. The cost of a food is measured by comparing its cost as a source of energy, building material, or body-regulating substances, with the cost of these things in other foods. Milk should be studied, therefore, from the standpoint of the cost of each of its most important nutrients before its use should be limited in the family dietary.

IS MILK A CHEAP SOURCE OF ENERGY

The energy that a food may yield is measured in terms of the calorie. The greater the number of calories a digestible food will furnish for a given amount of money, the cheaper is the food as a source of energy.

If ten cents is to be spent and the particular need to be considered is that of energy, the problem is how to invest that ten cents in order to buy the most energy.

Ten cents will buy the following amounts of energy in a few typical foods:

	Calories
In milk at 10 cents a quart	672.5
In milk at 8 cents a quart	840.1
In round steak at 26 cents a pound	271.0
In eggs at 35 cents a dozen	234.0
In eggs at 55 cents a dozen	153.0
In bread at 6 cents a loaf	1,713.5
In oatmeal at 5 cents a pound	3,601.5
In cornmeal at 4 cents a pound	4,037.0

These figures quickly convince one that milk is not the cheapest source of energy that can be included in the dietary, although it compares more than favorably with meat and eggs; that a combination of cereal and milk makes a cheaper energy-yielding meal than milk alone; that cereal alone is cheaper still. That is, however, no argument for excluding milk and eggs or for using cereal only.

Even these figures showing energy values, striking as they seem, must not influence one too much in estimating the cost of milk as an energy food, since two of the main sources of energy in milk, milk-fat and milk-sugar, besides their ability to yield energy, seem to have further significance in the dietary. Milk-sugar is believed to be of importance in holding in check putrefactive changes in the contents of the large intestine. This is particularly important in the case of the infant or the young child, who may be very susceptible to the injurious action of abnormal substances produced in the food canal. Rettger (1915), in a study of the influence of milk on the mortality and growth, states that " the beneficial effects which it is claimed have been derived from the use of yoghurt (buttermilk) and other oriental sour milk products have in all probability been due to the milk as such " and that " it is to be assumed that milk has this influence in virtue of the large amount of lactose (milk-sugar) which it contains." This statement is particularly interesting because of the ideas entertained concerning the special value of buttermilk in keeping the digestive tract wholesome. The fat of milk, as will be explained later, contains an unknown substance essential for growth and occurring in but few foods in amounts sufficient to promote normal growth. In considering the cost of milk as a source of energy, therefore, it is not entirely fair to forget these characteristics of two of its energy-yielding substances, since they play so important a part in human welfare and particularly in the welfare of growing children.

IS MILK A CHEAP SOURCE OF BUILDING MATERIALS?

By " building materials " is meant all that array of substances used by the body to build and keep its tissues in repair. Although none of these substances may be set aside as having greater or less importance than the others, some building materials undoubtedly play a more conspicuous part than others. A few of the most prominent ones — protein and such ash constituents as lime, phosphorus, and iron — will be used as a basis for comparing milk with other foods as a source of building material.

The Cost of Protein in Milk

Figures showing the amount of protein that various common foods will supply for the same amount of money may be seriously misleading. They should be accompanied by qualifying statements concerning the value of the protein from various sources. For example, ten cents will buy:

	Grams of protein
In milk at 8 cents a quart	40.00
In milk at 10 cents a quart	32.00
In cheese at 25 cents a pound	52.26
In round steak at 26 cents a pound	37.14
In eggs at 35 cents a dozen	20.60
In eggs at 55 cents a dozen	13.85
In dried lima beans at 10 cents a pound	82.10
In white bread at 6 cents a loaf	61.50
In cornmeal at 4 cents a pound	104.30
In oatmeal at 5 cents a pound	151.30

These figures without adequate explanation indicate that milk is not a very cheap source of protein. This criticism of the cost of protein in milk would be convincing if it were not for certain facts recently made clear about protein. Protein is a name given to a group of substances differing rather widely in their value to the body. Two foods may contain the same amount of protein; but an ounce of the protein from the first food may be much more valuable in building and repairing tissue than an ounce of the protein from the second food.

Exact data making it possible to say that this or that protein is twice or three times as valuable as another protein, are scarce, but some comparative figures on the value of various proteins in animal feeding are available, which will illustrate the point sufficiently well to clear up the record of milk as a cheap source of protein. McCollum (1916) gives the following table to show what percentage of various proteins eaten by pigs is used for building tissue:

	Percentage
Oilmeal proteins	16–17
Wheat proteins	20
Corn proteins	24
Oat proteins	25
Wheat germ proteins	40
Casein of milk	45
Skim-milk proteins	63

Hart and Humphrey (1915), as a result of experiments to determine what foods are best for the growing animal and for milk production, state that milk proteins have an efficiency for milk production and tissue restoration of 60 per cent as compared with an efficiency of 40 per cent for corn proteins and 36 per cent for wheat proteins.

In spite of the fact that these figures are not the results of experiments on human beings, it is still reasonable to conclude that they show that milk is a decidedly superior source of protein for general human consumption and that it is a particularly good source where growth is taking place; that the amount of protein required in the daily dietary may be less if milk forms a considerable part of the diet than if such foods as cereals are mainly depended on; that milk is not an expensive source of protein.

Milk as a Source of Lime

Although milk has been so liberally praised for the quality and cheapness of its protein, this is not the only conspicuous function of milk as a body-building food. Milk as a protein-yielding food can be replaced in the dietary more easily than milk as a lime-yielding food. Comparatively few common foods contain, in the amounts that can be eaten and digested by a child, a sufficient quantity of lime to provide for normal growth and health.

Milk is the richest in available lime of all the common foods, and its absence in the family dietary or its use in very limited quantities may prove to be an expensive procedure as well as an unsafe one. The abundance of lime in milk makes it at eight or ten cents a quart the cheapest possible source of lime, and at even fifteen or twenty cents a quart a very cheap source of lime. Ten cents will buy the following amounts of lime in common foods:

	Grams of lime
In milk at 8 cents a quart......................	2.045
In milk at 10 cents a quart......................	1.636
In milk at 15 cents a quart......................	1.090
In milk at 20 cents a quart......................	.810
In cheese at 25 cents a pound..................	1.990
In eggs at 35 cents a dozen......................	.149
In eggs at 55 cents a dozen......................	.096
In round steak at 26 cents a pound..............	.019
In dried lima beans at 10 cents a pound...........	.450
In white bread at 6 cents a loaf..................	.198
In whole wheat bread at 12 cents a loaf...........	.226
In cornmeal at 4 cents a pound..................	.170
In oatmeal at 5 cents a pound....................	1.179

These figures show at once the value of milk as a lime-containing food and the difficulties involved in planning a healthful dietary without it. When, therefore, in a family having growing children, the statement is made that the increasing cost of milk must cause a reduction in the amount of milk used, the housekeeper should be urged to consider the lime needs of the children before she seeks to reduce expenses in this way.

Of course, if all members of the family are adults, a lessened amount of milk may not be serious, but, even here, thought must be given to provide lime in other foods in order that adult welfare may not be impaired.

Milk as a Source of Phosphorus and Iron

Milk is comparatively rich in phosphorus as well as in lime, and forms an important and cheap source of this valuable element. Milk is low in iron, and, when it forms any considerable part of the diet, should be associated with foods rich in iron. In spite of its low iron content, it is an important food to use when the blood is low in iron, because lime in food is believed to increase the ability of the body to utilize iron. The question is frequently raised, Why, if milk is low in iron, does a baby thrive on it so well as the only source of nutriment? The answer is found in the fact that at birth the healthy baby has a stored surplus of iron in its body, which normally will last it through a period of nine or twelve months of maternal nursing.

IS MILK A CHEAP SOURCE OF BODY-REGULATING SUBSTANCES?

The term "body-regulating substances" is used to cover all the nutrients that play a part in keeping the machinery of the body in working order. The beating of the heart, the circulation of the blood, the ability to grow and reproduce, the ability to digest and absorb food, may all be classed as body processes regulated by certain substances furnished by food. All nutrients contained in food undoubtedly have some part to play as body-regulating substances. Protein, phosphorus, lime, and iron not only serve as conspicuous materials for building the body, but play a second part in regulating its activities. Salts, acids, flavors, are all concerned in regulating body processes. Important as these are, and as valuable as some of them may be when supplied in milk, they will not be considered at this time.

Instead, the discussion of milk as a cheap and practically essential food will be completed by considering other remarkable properties that it possesses.

Dietary Factors in Milk Essential to Growth — The So-Called Vitamines

In the past two years some results of deepest importance to human welfare have been accomplished, showing that besides all the nutrient substances that are now familiar, such as protein, fat, starch, lime, acids, salts, and flavors, there are other dietary factors essential to health and growth. Very little is known as yet about these factors that some foods seem to contain and others seem to lack, except that when the foods containing them are absent from the dietary, the young animal ceases to grow and the adult animal suffers in health. One serious disease of nutrition, beriberi, so common in some eastern rice-producing countries, has been traced to the too exclusive use of polished rice, which lacks these dietary factors. Other nutritive diseases somewhat like beriberi, and occurring in this country, may prove to be similarly caused.

A popular name, " vitamines," has been given to these essential dietary factors and is referred to now because many persons may have heard it used. The name "vitamine" is, however, not accepted as either good or descriptive by many of the persons doing the most work on this subject, and consequently is mentioned only in passing.

There seem to be two of these factors essential to right nutrition. One of them occurs dissolved in the fat of certain foods; the other one can be obtained from certain foods dissolved in water. For the reasons that one of these factors is soluble in fat and one is soluble in water, and that almost nothing more is known about them at this present moment than that they seem to be absolutely necessary, and that they occur in some foods and not in others, McCollum calls them " fat-soluble A" and " water-soluble B."

The fat-soluble factor that promotes growth and is essential to it, does not occur in all fats. This necessarily points to decided differences in the value of certain sources of fat. Milk-fat as it occurs in milk and butter and probably cheese, the fat in egg yolk, cod-liver oil, and, to a considerably lesser extent, muscle and kidney fat, contain this needed factor. Forage foods, such as alfalfa and cabbage leaves, seem to contain it in comparative abundance. It seems to be absent or deficient in lard and in all vegetable oils.

When this knowledge is summed up into usable form, it results in this statement: Since the human being has a limited capacity for forage foods, such as alfalfa and cabbage, and since he must have this essential factor in his diet to some extent in adult life and to a much larger extent in childhood, and since it is absent or deficient in the grains that he uses as food, he must depend primarily on milk, eggs, and meat for his supply. Further, since meat contains a smaller amount of this factor than milk or eggs, the two foods last mentioned take first rank as its sources. For the reason that meat-fat contains this factor in lesser quantity than does milk-fat, oleomargarine, although having the same energy value as butter, is less valuable than butter as a source of the fat-soluble A.

The Water-Soluble Growth-Promoting Factor in Milk

The second factor essential to growth, the water-soluble factor, is also absent from certain foods; and in its absence not only is growth prevented, but, as in the case of the too exclusive diet of polished rice in India, serious illness results.

This water-soluble growth-promoting factor, like the fat-soluble one, is present in amounts sufficient for growth in milk and eggs. It occurs in considerable amounts in the embryo of the cereal grains, but is absent in the grain from which the germ has been removed.

When white bread, polished rice, or degerminated cereals form an important part of the diet, as they frequently do, some food must be added that contains the water-soluble growth-promoting factor. Bread and milk make an excellent combination in this respect.

SUMMARY

With all the evidence in, no food bears the investigation of nutritive properties better than does milk. It is impossible to escape the conviction that not only is it a cheap food, but it is a food whose value can hardly be estimated in terms of dollars and cents. It has been pointed out that:

1. Although milk is not the cheapest source of energy that can be bought, it is nevertheless an important source of energy, and the energy-yielding substances — the protein, the milk-sugar, and the milk-fat — all have special value.
2. Milk is a cheap source of protein because the protein that it contains is of a kind particularly valuable for building tissue.
3. Ordinarily milk is the cheapest and most valuable source of lime, unless it is discovered that lime in water can take the place of lime in milk.
4. Milk is a valuable and cheap source of phosphorus.
5. Milk is deficient in iron, but the iron that it contains is particularly well utilized by the body.
6. Milk is the most important of the three foods — milk, eggs,

and meat — which are the chief sources of a factor in foods that is soluble in fat, that is essential to growth and health, and that is called "fat-soluble A."

7. Milk is one of the most important sources of a factor in foods that is soluble in water, that is essential to growth and health, and that is called "water-soluble B."

POULTRY HOUSES FOR NEW YORK STATE

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Egg production is dependent not only upon good breeding and feeding but also upon the physical condition of the fowl. As the hen's health is affected by her surroundings, it is important that we see to it that our poultry houses are adapted to her needs.

The principal factors involved might be classed under eight headings:

1. Location
2. Economical construction
3. Durability
4. Convenience
5. Comfort
6. Dryness
7. Cheerfulness
8. Good ventilation

LOCATION

The house should be built on dry ground with good air drainage and, if possible, where it will be sheltered from heavy winds either by orchards or other farm buildings, and near enough to these buildings to be convenient. If the flock is a large one, two fields should be enclosed with poultry fence and used alternately for pasture for the hens, or for separating the layers and the breeders during the breeding season.

ECONOMICAL CONSTRUCTION

The interest on the investment must be met by the income from the poultry. Hence, the greater the investment per hen the smaller the net profit. Many farms have unused buildings that may, by a small expense, be rearranged to make them suitable for poultry.

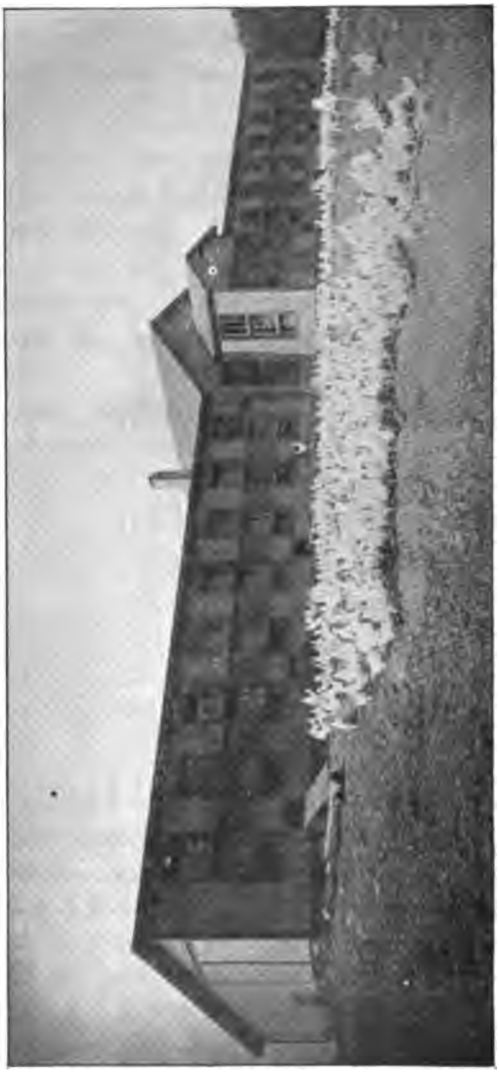

FIG. 23.—POULTRY BUILDING INCLUDING LAYING AND BREEDING PENS, FEED ROOMS, INCUBATOR CELLAR, AND OFFICE, ON PROPERTY OF ARDEN FARMS CO., ARDEN, N. Y.

A dry basement or the space under a hay loft is often better adapted to the production of winter eggs than is the modern separate poultry house, provided the arrangement conforms to the principles herein discussed. If new buildings are to be constructed, economy should be the first consideration.

DURABILITY

Buildings too cheaply constructed are short lived, require too many repairs, and are therefore expensive in the end, and they are never very satisfactory.

Poultry houses should be built to compare with other farm buildings. While material reasonably cheap can be used, they should be strongly built with the idea of permanency.

CONVENIENCE

The greatest expense in poultry farming is human labor. Therefore, not only the buildings but all the equipment must be arranged so as to minimize labor. Large, self-feeding dry-mash hoppers, holding several weeks' supply, can be used, also fair-sized drinking vessels or running water. All equipment should be placed up out of the way so as not to interfere with the fowls using all the floor space..

The layers can be kept in large flocks. Five hundred in one flock give better results than do the same number divided in several pens, when we consider the economy of labor with other factors. The labor of cleaning out the litter or filling the hoppers may be lessened by having large doors at the ends of the house, wide enough to admit a horse and wagon.

COMFORT

Comfort to a hen means a dry, cheerful, and well-ventilated home where she can be kept busy and maintain good health, and also free range or a field run large enough so she can have plenty of outdoor exercise and a good grass range.

DRYNESS

This can be secured by placing the house on a good, well-drained concrete foundation and by constructing an insulated concrete floor. This insulating may be accomplished by the use of stone, gravel, or cinder filling; then a layer of concrete; over this a layer of tar paper, well lapped, the laps being painted with tar; then one or two inches of concrete mixed about one to three. This layer should be trowelled smooth, making it easy to be cleaned. A single-walled house, well ventilated, is easier to keep dry than one having a double wall filled with dead air.

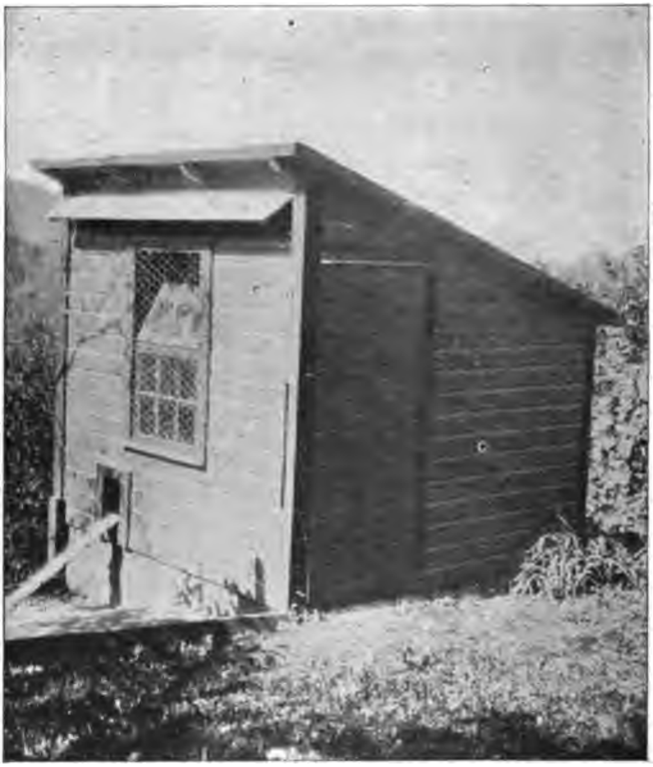

FIG. 24.— A SATISFACTORY TYPE OF SMALL POULTRY HOUSE.

CHEERFULNESS

The ancestor of our modern hen lived in the open air and was accustomed to plenty of sunlight. Hens work best and maintain health longer in a bright, sunny house than in a dark, dreary one. Too much glass gives too wide extremes of heat during the day and cold at night. About one square foot of glass to sixteen square feet of floor space gives the best results for New York State conditions.

Whitewashing the walls of an old building will lighten it up and greatly add to its cheerfulness, as well as to its sanitation.

Plenty of clean litter will also make the house home-like.

GOOD VENTILATION

On account of the high normal temperature of hens (106 degrees) they consume much more oxygen than do mammals. Therefore they need more pure air than is usually allowed them. Ventilating systems that are used satisfactorily in dairy and horse barns do not work well in poultry houses, due to the small amount of animal heat released in the room. A ton of poultry require many times more cubic feet of air space in order to allow enough floor space for them than does a ton of live weight in cows or horses.

One of the best systems used at the present time is the arranging of the windows so as to open separately each sash in from the top and between side guards in order to force all the air up toward the ceiling, the lower one to be opened in cooler weather and the upper one or both on warmer days. They can all be removed during the warm summer months.

In order to keep the hens more comfortable at night a tight ceiling should be placed on the studding and rafters, from the dropping board up and over as far as the front of the perches, the space in back of this to be open at the top and bottom to allow a free circulation of air.

A narrow opening six or eight inches wide should be made under the rear eaves to be closed in winter and open in summer, thus allowing the air to circulate through the house but not causing a draft on the fowls as the air first enters the space between the rear wall and the ceiling above described.

TYPES OF HOUSES

There are many types and shapes of buildings used satisfactorily for poultry, especially where they conform to the principles herein discussed.

Many of the most successful poultrymen of New York State prefer the types recommended by the Department of Poultry Husbandry of the New York State College of Agriculture at Cornell.

These buildings are as nearly square as possible up to twenty-five feet — a 12x12 for 35 to 40 hens, 16x16 for 60 to 75, 20x20 for 100, 20x24 for 125, and a 25x48 for 400, allowing four square feet per hen for small flocks and three square feet for large flocks, although varying somewhat as to size of fowl. Most of these houses are built with a one-way or shed roof, five feet high in the rear and from seven to ten feet high in front, depending upon the width.

This type allows all the rain to run off the rear and gives good ventilation and plenty of well-distributed sunlight.

We keep our cows and horses in stables, our pigs in pens, but our hens in houses. Hens have a greater love of home than any of our other domesticated creatures, for "chickens always come home to roost." This home feeling should be taken into consideration when constructing buildings for them if we expect the maximum production at a minimum cost.

MATERIALS REQUIRED FOR CONTINUOUS HOUSE 25 FEET DEEP

One 24 x 25*-foot Section and One Partition*

16 2x4″ 12′ sills and plates.
16 2x4″ 10′ studding.
2 2x4″ 16′ studding.
3 2x4″ 12′ studding.
8 2x3″ 12′ perches.
1 2x3″ 16′ perches.
3 4x4″ 8′ roof support posts.
2 3x6″ 12′ roof supports.
10 2x6″ 28′ or 20 2x6″ 14′ rafters.
6 2x3″ 16′ dropboards, nests, etc.
1900 feet N. C. Pine, D. & M.— Roof, ceiling, partition, rear end and drop boards.
175 feet cove or novelty siding, for front.
2 1″x6″—12′— front braces.
2 ⅞″x12″x10″ — nests.
4 ⅞″x6″x10″— nests.
2 ⅞″x9″x10″— nests.
1 ⅞″x12″x4″ — nests.
4 ⅞″x3″x10″ — nests.

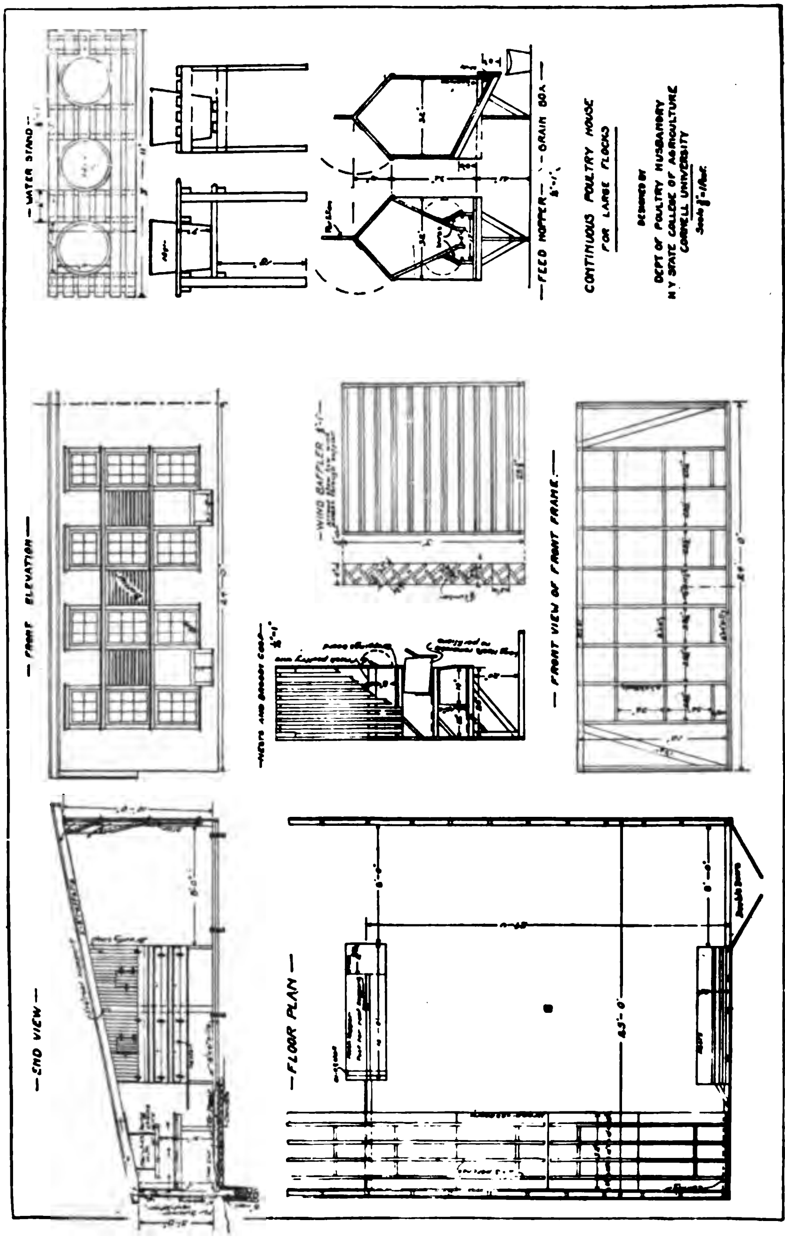

FIG. 25.—DIAGRAM OF CONTINUOUS POULTRY HOUSE

4 ⅞″x3″ — 12′ — broody coops.
15 ½″x2″ — 12′ — broody coops.
1 ⅞″x6″ — 10′ — broody coops.
7 ⅞″x4″ — 12′ — cornice facings.
1 ⅞″x4″ — 12′ — corner facing.
1 ⅞″x4″ — 6′ — corner facing.
1 ⅞″x3″ — 12′ — corner facing.
1 ⅞″x3″ — 6′ — corner facing.
4 ⅞″x6″ — 12′ wind shields.
4 ⅞″x3″ — 12′ window facings.
4 ⅞″x3″ — 16′ window facings.
3 ⅞″x4″— 9′ door facings.
2 ⅞″x6″ — 12′ rear ventilator doors.
1 ⅞″x6″ — 14′ window sills.
2 ⅞″x6″ — 18′ window sills.
2 1″x4″ — 12′ rear ribbon.
2 ½″x½″x8′ W. Pine — feed hopper.
70 feet 12′ N. C. Pine — D. & M. Feed hopper.
2 ⅞″x5″ — 8′ — feed hopper.
2 ⅞″x8″ — 7′ — feed hopper.
135 feet — 10 ft. ⅞″ N. C. Pine — D. & M.— feed hopper.
6 ⅞″x3″ — 12′ white pine — feed hopper.
11 ⅜″x3″ — 16′ dressed cypress — wind bafflers.
6 ⅜″x1½″ — 16′ dressed cypress — wind bafflers.
1 9/16″x4″— 10′ dressed cypress —wind bafflers.
1 9/16″x4″— 12′ dressed cypress —wind bafflers.
8 9-light sash 8″x10″ glass.
4 6-light sash 8″x10″ glass.
3 prs. 6″ heavy strap hinges — door.
1 heavy thumb latch — door.
4 prs. 4″ strap hinges — rear ventilator doors.
3 prs. 3″ strap hinges — nests.
3½ prs. 3″ strap hinges — broody coops.
5½ prs. 3″ strap hinges — feed hoppers.
4⅞″x3″ — 12′ water stand.
8 2″x3″ — 2′ 2″ water stand.
1 piece 1″ mesh poultry wire 2′x10′ — broody coops.
4 pieces 2″ mesh poultry wire 2½′x3′ — windows.

4 24″ chains — perches.
4 30″ chains — perches.
16 3″ hooks — perches.
(Heavy wire can be used in place of chains)
2 6″ door bolts.
40 lbs. 8d nails.
10 lbs. 10d nails.
5 lbs. 20d nails.
7 sqs. 3-ply roofing paper — roof.
25 sacks Portland cement — walls and floors.
6 sqs. 2-ply tar paper — floor.
15 ½″x8″ bolts for sills.
3 sqs. 2-ply roofing paper for rear and end or 3 sqs. building paper with 350′ siding.

HOW TO SELECT THE BEST LAYING HENS WITHOUT THE TRAP-NEST

L. M. Hurd

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The successful poultry man is the one who saves his best laying hens each year for breeding purposes. Every poultry keeper culls his hens yearly as a rule, but he does not throw out the poorest hen in every case — not because he does not want to do so, but because he has had no particular way of telling the good from the bad, until recently. During the last few years the trap-nest has provided the experimental stations an accurate means of studying the production of hens. As a result many interesting facts have been established.

TRAP-NESTS AND WHY

The trap-nest shows that there is a great variation in the way in which pullets begin to lay, even though they are hatched at the same time. Also that there is the same variation in the way in which the same birds quit laying. Strangely enough, the first pullets to lay are quite often the last hens to stop laying the following fall. The last pullets to begin laying are generally the first to stop laying the following summer. To sum up: the one class of hens are long-term, persistent layers; the others are short-term, inconsistent layers. The nearer hens approach one extreme or the other, the better or poorer laying birds they are likely to be.

Moreover, it has been found that it is possible to judge the future performance of a hen quite accurately by the way in which she produces in her first laying year. The high-producing hen will generally follow that tendency year by year; the low producer will be likewise a low producer for life. In both cases, however, the average yearly production will decrease, as the age of the birds increases. Most hens will have passed their usefulness as layers

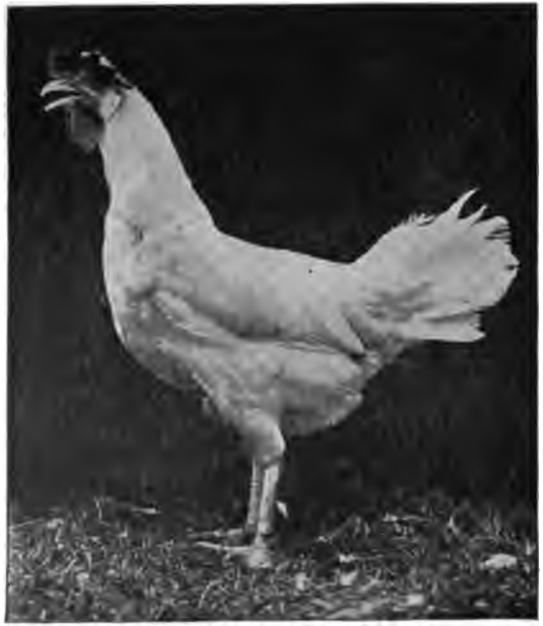

FIG. 26.— A GOOD LAYER.

Record — Oct. 15, 1916, to Aug. 17, 1917 — 190 eggs. Note pale color of beak, earlobes, face, and shanks; old, unmoulted, ragged plumage; full, bright, waxy comb; full earlobes; and deep abdomen.

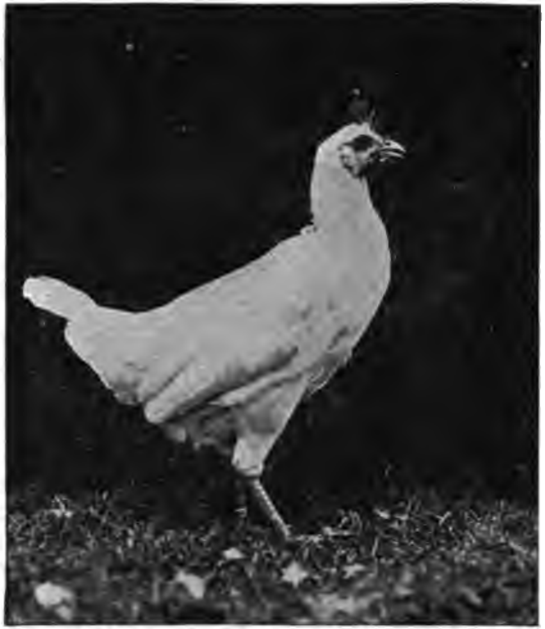

FIG. 27.— A POOR LAYER.

This hen began laying Mar. 3, 1917; stopped June 16, 1917. Record — 36 eggs. The yellow color of head, shanks, and plumage was very noticeable. Note the hard, dried, scale-covered comb; wrinkled earlobes; and full face.

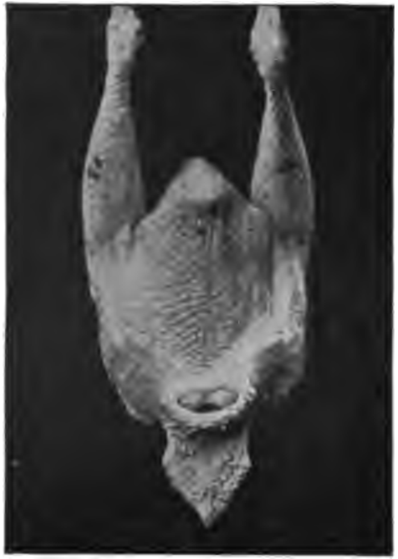

FIG. 28.— BIRD IN LAYING CONDITION.

Note the soft, flabby condition of the skin; large, full, moist vent; and wide-spread pelvic arches.

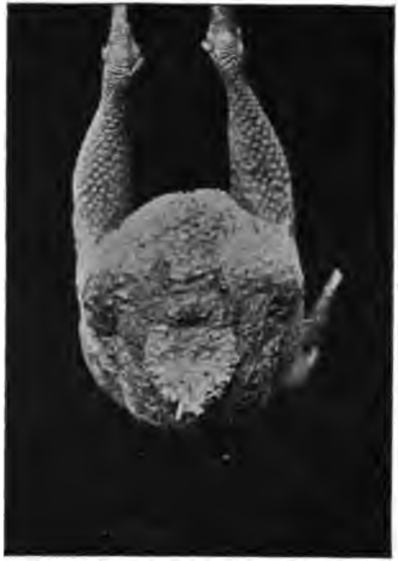

FIG. 29.— NON-LAYING BIRD.

Note the full, hard, plump condition of the body; small, hard, puckered vent; and short distance between the blunt pelvic arches.

when they are three years old. As breeders they can be retained longer and are of inestimable value, due to the fact that they have the vigor and persistence of production.

The trap-nest has shown the kind of hens we should keep, and it has also given the clues to distinguish the laying hens from the non-laying hens. The time to apply the tests is from June 1 to December 1. The best laying hens continue their laying after September 1, and the later they lay the better they are. All such hens can be retained with profit. Those that bring their egg production normally to a close before September 1 are the individuals that should go to market. Hens cease laying in June; hence the culling should begin then and continue regularly every week or so until September.

CHARACTERISTICS OF LAYING HENS

The signs of laying and non-laying hens as given by Mr. O. B. Kent of the Poultry Department of the New York State College of Agriculture at Cornell University are as follows:

Comb.— A heavy laying bird has a firm, waxy comb. As production decreases, the comb becomes soft and then finally shrinks down hard and dry. When coming back into laying condition, the comb is warm and the scales break up and slough off.

Face.—A laying bird has a fine-drawn feminine face, as contrasted with the coarse, beefy face of a non-laying bird. The face is also light in color on a laying bird.

Eyelids.— In yellow-skinned birds, the pigment is withdrawn from the edges of the eyelids during heavy production. The color comes back when production ceases.

Beak and shanks.— The yellow pigment gradually fades out with production. The yellow color is obtained largely from green stuff, such as grass. Birds on free range will retain color much longer than those on bare yards.

Skin.— The skin is soft and pliable on a laying bird, and hard — frequently dry — on a non-laying bird.

Earlobes.— The pigment is withdrawn from the earlobes the same as from the eyelids and face. The rapidity with which the yellow color is withdrawn depends on the rapidity of the blood circulation of the part. Hence, the vent bleaches out quickest and the shanks slowest.

Pelvic arches.— The pelvic arches spread out with heavy production and contract as production decreases. After production has stopped, a layer of fat is deposited on the pelvic arches, making them feel blunt and stiff.

Abdomen.— The abdomen of a laying bird, due to the increased length of intestines and material contained in them and the increased sizes of ovary and oviduct, is very much enlarged and is also very soft and pliable.

Fat.— When a bird has stopped laying for some time, fat is deposited underneath the skin. This makes the breast feel hard and heavily fleshed, the back of the shanks round and full, and the face full.

Plumage.— A bird rarely starts moulting until after she has stopped laying. The back and abdominal feathers are shed first.

Appetite.—A layer is a good eater, and hence goes to roost with a full crop.

Vent.— The vent of a laying bird is large, full, and moist, as compared with the dried, shrunken vent of a non-laying bird.

PROFITABLE SWINE PRODUCTION ON THE GENERAL FARM

H. B. Harpending, Dundee, N. Y.

Breeder of Berkshire Swine

The use of forage crops for supplementary feeding in the growth of swine is beyond the experimental stage. Results of varied experiments at different state colleges, together with the experience of practical swine breeders and farmers, bear this out.

A crop rotation may be carried out in small lots devoted to swine pasture whereby such lots will furnish a large portion of the feed for the young and growing animals and the sole ration for mature animals during many months of the year; and, by means of such cropping, the pork production per acre will not only pay excellent profit for the labor and the use of the land, but the fields so used will gain in fertility from year to year to a surprising extent.

Each individual is governed, of course, by the number of hogs to be maintained or fattened and also by the land at his disposal suitable for the purpose. For best results, lots devoted to forage crops should range from an acre to three acres in extent.

The following crops will be found satisfactory and profitable for the purpose under New York State conditions: alfalfa, red clover, rape, rye, rye and winter vetch, corn, corn and soy beans, sorghum. Permanent blue grass pastures are always in order and furnish considerable feed during the growing season except in midsummer. A permanent stand of alfalfa will not endure heavy pasturing by swine and when used to any extent for this purpose it must occupy its place in regular rotation. It should be pastured only to about one-half its capacity and regularly cut and harvested when the new growth appears at the crown, the same as if it were not being grazed. A good stand of alfalfa will produce about 500 to 600 pounds of pork per acre during the season. Red clover produces about one-half to two-thirds as much.

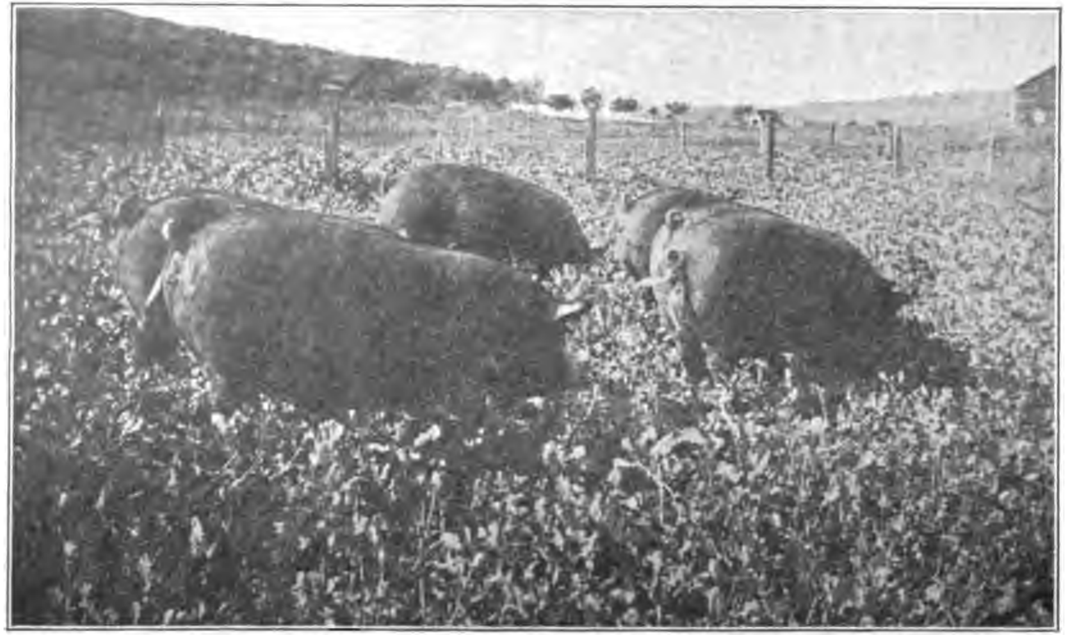

FIG. 30.— SUMMER PASTURE IN RAPE.

Dwarf Essex rape has come into general use with pork producers and makes an excellent pasture. It may be sown in the corn at the last cultivation ahead of the cultivator, about three pounds to the acre, and will furnish considerable feed after the corn is removed, lasting well into November. It is damaged but slightly by heavy frost, but should not be pastured when in a frozen condition. When sown alone for pasture, it may be drilled or broadcasted, about three to four pounds to the acre, any time after the ground is fit in the spring up to July 1, an early seeding being advisable. It is essential that rape be permitted to make new growth from time to time, and on that account it will be found advisable to have two separate enclosures for this crop or to remove the swine to other pastures while it is making new growth. Should it get the start of the pigs, furnishing more feed than they can consume at the time, it should be pastured down with sheep or cattle or clipped with a mower. When so treated, it makes most luxuriant growth and will produce from 400 to 500 pounds of pork per acre during the season.

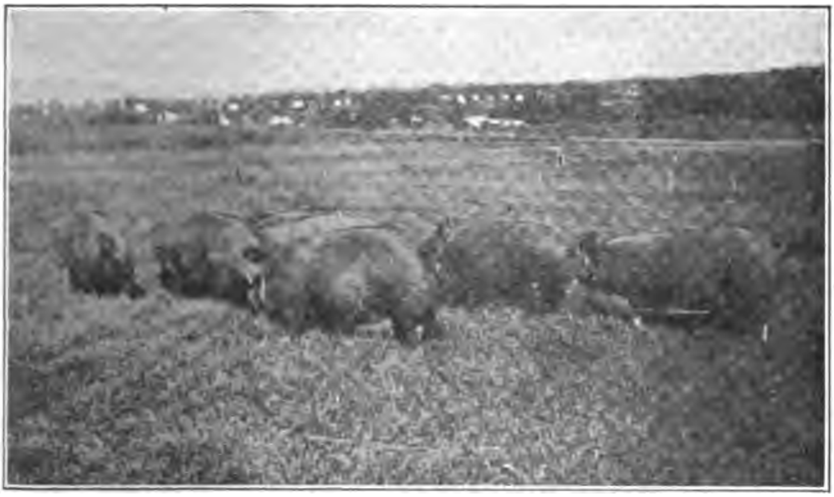

FIG. 31.— RYE AND VETCH PASTURE IN LATE FALL.

Rye may be sown alone for winter pasture or in combination with winter vetch, the latter being advisable — 1½ bushels of rye to ½ bushel of vetch drilled or broadcasted from August 10 to 20. It is suggested that the vetch be inoculated with cultures or soil. Sufficient may be secured from the College of Agriculture for twenty-five cents to inoculate an acre of vetch; full directions for its use will accompany same.

This will be ready to pasture in October and may be used throughout the winter and spring. It is injured but slightly by trampling, but the pigs should be thoroughly rung to prevent rooting. If the crop is to be harvested, the pigs should be removed from the pasture when the rye commences to joint; after the crop is matured it may be hogged down or harvested and threshed. This turned under in the spring, will be found an excellent crop to precede corn, since humus is added to the soil and the pigs after pasturing the field throughout the winter have supplied considerable manure. Should it make rank growth in the spring before there is an opportunity to plow it, cattle or sheep will trim it down to excellent advantage.

The practice of sowing rye and vetch in the above proportions in corn at the last cultivation, to be covered by the cultivator, is strongly recommended and a trial will induce its continuance. As soon as the corn has been cut and removed from the field, or shortly thereafter, the hogs may be turned in upon the rye and vetch and remain thereon during the winter. The growth will serve the double purpose of pasture and cover crop. Any corn field may be utilized for this purpose if well fenced. The accompanying photograph shows a field of rye and vetch which follows corn, having been sown in the corn at the last cultivation, and which produced on ordinary land thirty-seven bushels to the acre.

If the rye or rye and vetch is left to mature, it is advisable that the lot be seeded with clover and alfalfa, half and half, about eight or ten quarts per acre, at the usual time for seeding clover in the spring. This may be pastured the following season and later turned under for corn. Land thus utilized will increase rapidly in fertility, furnish considerable pasture for swine, and at the same time produce the usual crop of corn and grain.

The practice of hogging down corn, so common among western feeders, has never appealed to the eastern farmer, perhaps because of the consequent loss of the stalks which are regarded as of no small value to us. Aside from this the practice is not so wasteful as it would seem at first consideration. If a careful record is kept of the pounds of pork produced on an acre of corn or of

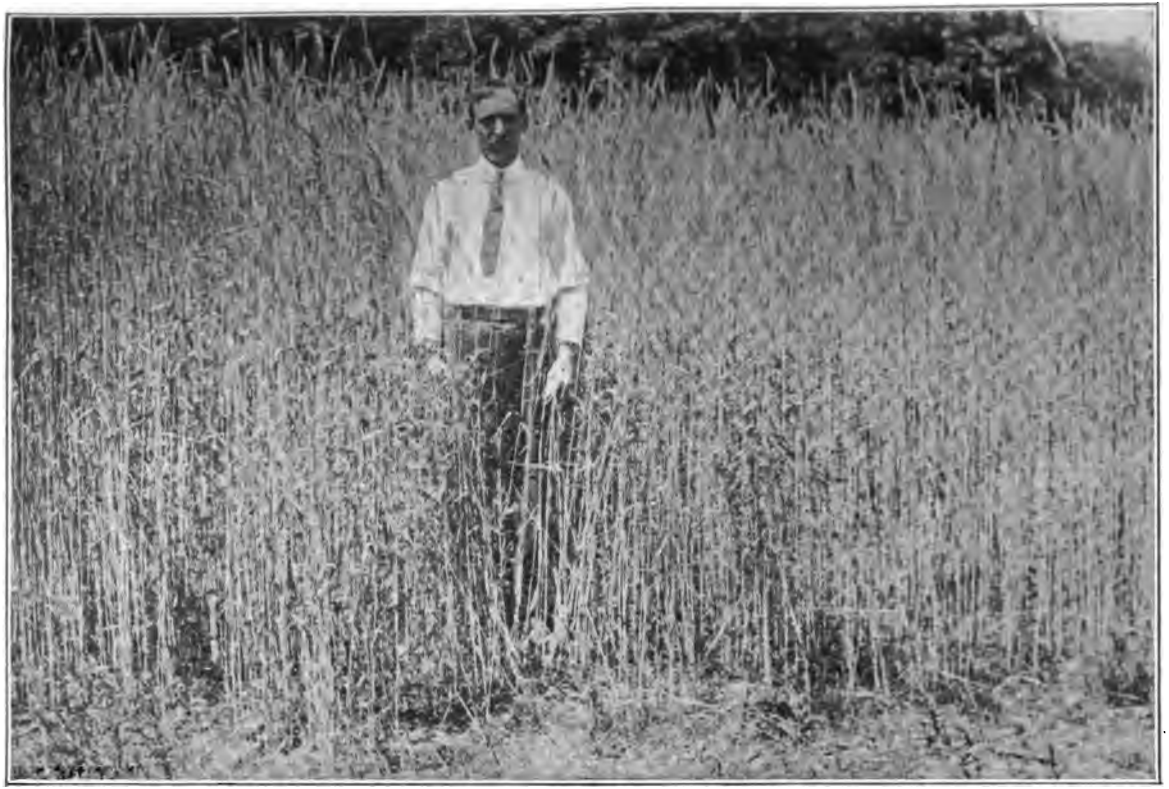

FIG. 32.— RYE AND VETCH FOLLOWING CORN. YIELD OF 37 BUSHELS PER ACRE. FARM OF H. B. HARPENDING, DUNDEE, N. Y.

rye harvested by the hogs, it will be found that it has paid better than if harvested and marketed in the usual way with much less labor expense, and the resultant manure is already scattered about the field.

To those feeders who do practice hogging down corn, or contemplate the same, the suggestion is made that soy beans be planted with the corn and that a cover crop of rye and vetch be sown as before advised. By the time the corn is mature, the beans will be ready for the hogs and an already-balanced ration is supplied. The hogs will eat the beans, pods, and plants almost as greedily as they will the corn. Besides, the field will rapidly gain in fertility.

Unless the source is on your own farm, avoid the running stream as you would a pestilence.

Any of the forage crops above mentioned will maintain mature animals without additional feed. The youngsters and the animals being fattened will require a supplemental ration and access to drinking water.

Good fences are necessary where the hogs are maintained on range. The woven wire fence with a substantial knot that will not slip is required. There are several good makes on the market. The top and bottom wires should be not less than No. 9. Upright stays a foot apart are sufficient and much cheaper than the regularly advertised hog fence with stays six inches apart. Twenty-six or twenty-eight inches is sufficiently high for most breeds of swine. Unless the hogs are kept well rung, it will be necessary to run a strip of barbed wire along the bottom of the fence. As with all other wire fencing, the end posts should be substantial and well set and the fence should be well stretched and tacked on the posts as close to the ground as possible.

THE DUTY OF THE FARMER TO THE COMMUNITY

A. R. Mann

Dean, New York State College of Agriculture, Ithaca

In this final lecture in your series we are to leave off the questions of production and all the range of technical farm problems, and we are to turn to the ultimate factor in the whole country life program, namely, to the farmer himself and his relation to his community. We shall shift the emphasis from the physical and material values to the things that contribute more directly to human values. The topic that has been assigned me is quite in keeping with the present-day insistence that a person is accountable, not only for the attainment of his own success and well-being, but also for the way in which he gains his success — how his personal endeavors affect other people — what he contributes to the common lot as he goes by the way. For we have come to recognize that the best living is that which is helpful to others as well as to one's self, and that the greatest good is the good of all.

I want to consider my topic first from the standpoint of certain principles involved.

A MAN'S DEBT TO HIS COMMUNITY

If we are to make any progress in discussing what a farmer owes to his community we must start with the full acceptance of the fact that he does owe something to his community. This ought to go without saying, but it does not. In every community there are a few persons that seem to be utterly unaware that they owe anything to their neighbors and neighborhoods, and there are many that have such a slight attack of community spirit and community responsibility as to be innocent of any charge of spreading the germ of community service or of ever starting an epidemic of neighborhood improvement. Whether there are more of such in the city or in the country does not matter. There is an over-plus in both places. There is no person, wherever and however he is situated, who does not owe something to his community that he is under moral obligation to provide. This statement is more than a mere truism. It is a truth which needs emphasis over and over again. We may tire of it, but it needs insistence until it is absorbed into the very nature.

Just now, under the excitement of impending war, we all want to do something for the welfare of our common country; and this is well and praiseworthy and fundamental. It is as it ought to be. But a sterner test of loyalty is the kind of service that we render to the common cause when conditions are quiet and plain and normal and the load has to be steadily borne.

Every one of us is under moral obligation to return something to the common lot. Seldom do we stop to realize how utterly dependent each of us is on all the rest and how impossible and absurd is the idea that there can be any great amount of actual individual independence.

WHAT THE COMMUNITY DOES

The community, or, if you prefer, the government, which is simply the community organized and at work, guarantees the purity of our food and the accuracy of the weight of it when we buy it at the store. It fixes the hours of labor, the sanitary conditions, the provisions for health and safety in the factories in which our clothing is made. It lays down rules and regulations governing the houses in which we live. The community protects our houses from fire and ourselves from injury or robbery. It prescribes our education. It throws limitations about our forms of recreation. It prescribes how we shall behave on the street and in public places. It protects our health by fixing the standards and licensing the doctors who may practice on us. It guarantees that no one shall encroach on our property; that our fence line, if it is accurately located, shall not be violated; that the title which we hold to our land shall be secure, so that we are safe in investing in our lands and buildings; that our herds shall be protected by quarantine against the ravages of certain diseases that may break out in the locality; that the feeds and fertilizers which we buy shall be what they are represented to be; that the mail shall be delivered at our door by rural free delivery; that on the Sabbath we shall be forbidden from doing certain things which we may do on other days. Nay, more, the community determines on which side of the street or road we shall drive, how we shall turn the corners, where we may stop. Talk about being independent! Our lives are linked up with the community at a thousand points.

None of these things that the community now guarantees to us would be possible, if persons did not recognize mutual rights and mutual obligations and responsibilities; if as citizens we did not realize that in order to gain protection and advantage for ourselves, whether in country or city, we must help to guarantee protection and advantage for others; that as members of the commonwealth we must bear our share of the common load. All of these common benefits of mankind have reached a degree of efficiency in each community in proportion to the measure of public support and interest which they have received.

URBAN CONDITIONS

In a large city people may be able to go about with very little sense of public responsibility for the common good, because the population is so dense that the single individual often does not count. I mean, there is opportunity for him so to withdraw himself that he can count for but little in the mass of humanity. This cannot be in the open country without causing public concern and inquiry. In the country the person stands out as an individual. He counts one. He is known to exist. His entering in and his going out are known; so are his interests, his habits, his manner of life and of work, his attitude toward neighbors and toward community organizations and institutions. The population is relatively sparse, and it is possible for each to know every other person in the locality. I have inquired in the city for certain families, and people living in the same block and even in the same series of apartments, within 100 feet, knew them not. Nor can he be indifferent to the interests and opinions of his neighbors. In the city one can be on bad terms with his immediate neighbors and yet not lack for human companionship or social life. If he doesn't like the group among whom he lives, he need not go far of an evening to find any number of other groups, one of which will be congenial. In a large city population every type of mind and of behavior can find a congenial group — the musician, the artist, the financier, the speculator, the gambler, the socialist, the anarchist, the scholar, the writer, the pickpocket, the robber, the thug, the gunman, and all the rest can find each his congenial group somewhere in the large population. He can go out of his immediate neighborhood if he doesn't like the folks that live there, and if they don't like him, and in ten minutes' walk or a few minutes on the car he can consort with his own kind. To no small degree he can be indifferent to public opinion of his own locality without being completely cut off from human companionship.

RURAL CONDITIONS

I drive along the country road and inquire for Brown's farm, and I am promptly told that it is three miles farther, the second turn to the right beyond the four-corners just after you pass the schoolhouse. And if I stop to inquire what sort of farmer Mr. Brown is or how many children he has or how long he has lived in the locality, I stand a good chance of getting the information I am looking for. In the open country one cannot be entirely unknown to his neighbors, if he remains long enough to attach himself to the locality.

In the open country one cannot be indifferent to the interests and opinions of his neighbors without being cut off. He can't jump on a car and in a few moments find companionship of his own choice. He doesn't leave his house in the morning and go into a different neighborhood and social group to do his day's work or to spend his evenings. His surroundings and his associates remain the same day and night; his neighbors constitute his only possible companionship a good part of the time. When I say neighbors I mean all the farm families in the neighborhood and community, not simply those occupying the next farms; for in the country the neighborhood is wide. To be sure, the farmer can drive to town; but in the average country town his manner of life will be sufficiently well known so that he cannot thus make any escape from his reputation, should he desire to do so. Farmers are usually not harsh critics. They are likely to be generous in their sympathies. But they are likely to know many facts about their neighbors; and public opinion is a powerful force in a small group in the midst of which one must spend his life.

I am taking time to emphasize this point because it has its roots in fundamental social facts. One has to be neighborly in the country if he is to satisfy the normal human cravings for companionship and association without which one becomes dwarfed and abnormal. This sort of argument is, however, of the same kind as that which would persuade a sinner to become righteous for fear of the punishment from his sins, rather than because righteousness brings its own greater reward and is to be coveted for itself.

FIG. 33.—CORTLAND COUNTY FARMERS ON A CROP INSPECTION TRIP.

There are, however, outstanding positive reasons why the farmer should live acceptably and helpfully in his community; why he should discover his obligations to his community and should render them in the normal course of life.

The open country is unencumbered with much governmental machinery, and there are few paid public servants to look out for the common interests. Many of the improvements come through voluntary effort and through a real but often unexpressed appreciation of mutual needs. A good farmer is just as careful to fence his stock in so that it won't get into his neighbor's fields as he is to fence his neighbor's stock out. Farmers don't spend much time talking about the Golden Rule, but in a well-ordered community the sense of mutual obligation to treat others as one expects to be treated is pretty well worked out. A good farming community lives not so much by laws and ordinances as by mutual regard and consideration.

REAL COOPERATION

It has been said that farmers won't cooperate. But the barn-raising and the corn-husking which have become classic were products of the country, in which neighbors came together to cooperate not for personal financial gain, which is the common and approved mark of a cooperative enterprise, but out of pure neighborliness. The real neighborhood, the place where people are real neighbors, is characteristic of the country rather than of the city. Last year I was talking with a professor in the University of Chicago. He told me he had lived in the same apartment for seven years, but he did not know the family who lived up-stairs. Families may share the same vestibule for a year and not have more than a speaking acquaintance. In the city it is hard to define what is a real neighborhood. One may have many friends, scattered far and wide; but he is fortunate if he is blessed with many real neighbors.

CIVIC RESPONSIBILITY

In the large city where the machinery for getting things done is well worked out, a man, if he will, can live without any consciousness of civic responsibilty. If this man moves to the country and is there devoid of a sense of civic responsibility he will become a negative force in the community, for he will fail to carry his share of the load. Rural citizenship will decline if rural citizens fail to recognize and to discharge their normal community obligations.

The family that lives in the country must find its main satisfactions in the folks that live there, in what nature offers, in a few simple community institutions, and in the work of the day. Life must find a good part of its contentment in the plain and wholesome things of the countryside. The character and the content of this life is everywhere determined by what the people in the locality contribute to the common experience. The life is what the people make it in a very real sense.

What are some of the things in which farmers have a common interest, and which it is the duty of every farmer in the community to foster?

Good Farming

First we may mention good farming. We have not generally recognized that the farmer owes a duty to his community to do good farming — the best that he is able to do under his personal circumstances — nor that farmers are concerned about what kind of farming their neighbors do. But this is of first importance.

Unless the farming itself is good, all community institutions and enterprises will suffer from lack of support. You cannot build a community life that will endure on an economic basis that cannot sustain it. Good farming lies at the root of good living and of good community building, for it provides the means to do with.

We must recognize that the will to do good farming is not always, nor perhaps usually, a matter of personal determination, as there are so many economic and other factors involved. But one needs to feel responsibility to do his best under all circumstances. The community has a right to expect that a farmer shall not farm in such a way as to rob posterity by a soil-depleting system. But the community that makes such a demand must be willing to back it up by allowing the farmer to get sufficient return from his crops so that he can afford to put more into the production of his crops. The farmer has all too often been censured for his methods by people who resent every increase in price which will help to make better farming possible. It takes capital to do farming just like any other business. Improvements cost money everywhere. The farmer can't help it that he must adjust his farming to his capital. Other businesses have to do likewise. But one has a moral responsibility to do the best that he can under his own peculiar circumstances.

The farming of a region gives character and reputation to the region and farmers are mutually benefited or disadvantaged by the character of the farming that their neighbors do.

Good Schools

Good schools are a matter of common interest. Weak schools indicate a weak community — weak in child resources, weak in its agriculture, or weak in attention to its public school needs. A strong community is likely to have strong schools. The older generation may get along with poor schools, but the younger generation, with children to educate, will be led to leave the community and settle where their children can have reasonable advantages. Good schools are fundamental to good, enduring community life. Good schools are the product of good citizenship on the part of the people who live in the place. They don't come by any other means.

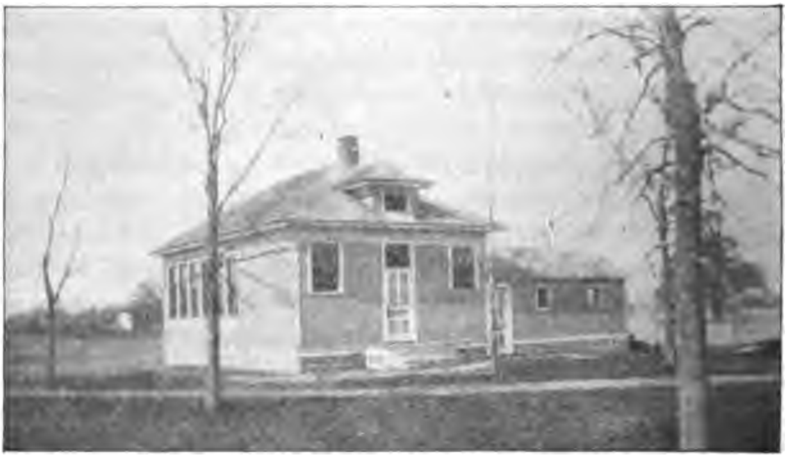

FIG. 34.— A MODERN NEW YORK COUNTRY SCHOOLHOUSE.

Good Roads

Poor roads help to eat the profits out of farming. They help to determine whether a farmer gets a reasonable net return on what he ships from the farm. They affect land values. They have a lot to say about how accessible school, church, grange, shop, mill, and postoffice are, and whether the farmer, already short-handed, can afford to take the time necessary to drive over them. Roads do not improve themselves. Many a community that wants good roads is prevented from getting them because of persons in the community who are lacking a sense of public responsibility.

Good Churches

Churches, more than other community institutions, depend on the voluntary cooperation and support of the people. We can levy taxes for schools and roads; but the church thrives or languishes on the voluntary support of the locality. The church is a fundamental rural institution. It stands to teach righteousness — to call men to the highest and best things in life. It helps to safeguard the integrity of the community. The churchless community is not a good place in which to live. Yet the sense of personal responsibility for the upkeep of this essential institution is not always strong among us. When the pinch comes, it stands among the first things to be neglected. Good country life calls for well-supported churches.

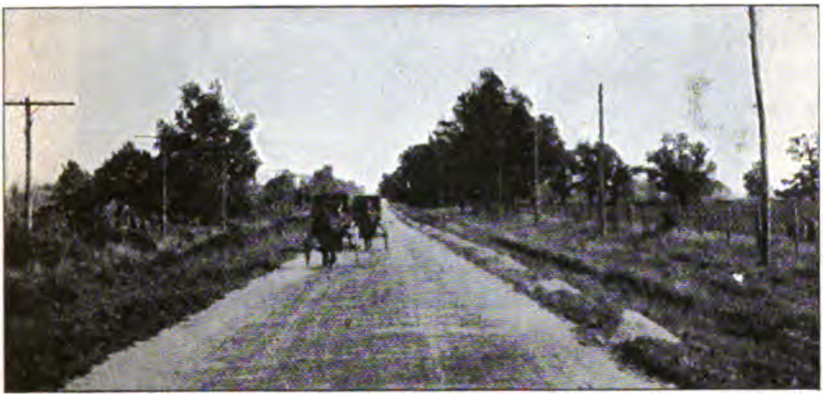

FIG. 35.— A GOOD COUNTRY ROAD IN NEW YORK.

Good Recreation

No community can be complete nor properly developed which does not provide good recreation for young folks and grown-ups alike. The open country has little organized recreation. Probably it needs more organized recreation. I doubt whether it needs much more commercialized recreation. Good, wholesome recreation is vital to good living, and it can be provided, where each will do his part. Our whole attitude toward recreation is changing and we are finding that it can no longer be left to take care of itself but must be consciously and intelligently provided for. Most of the prevalent evils in social life have grown out of neglect to provide proper recreation. Character is made in the leisure time, when one expresses himself without restraint, as well as when one is under discipline. People living in the country have a duty as well as other people to see that adequate and appropriate recreation is provided.

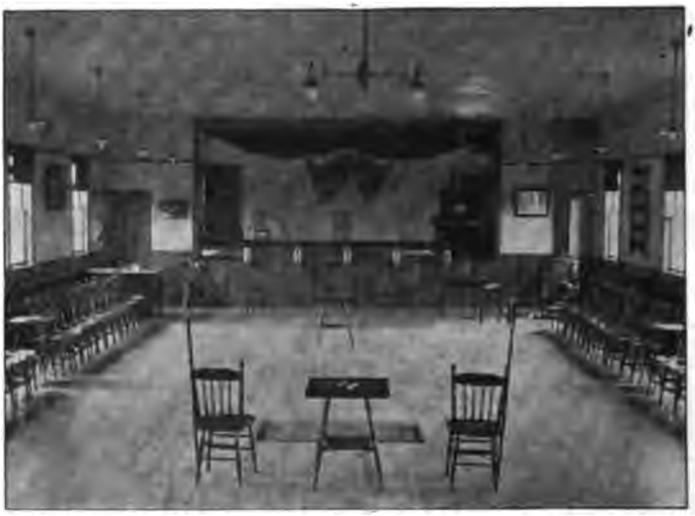

FIG. 36.— A GRANGE HALL.

Good Public Utilities

Good telephone service, good mail delivery, and good transportation service depend in a large degree on local initiative. We all want to have good service in these respects and we must get out and pull or push if we are to get it. These things come by united effort.

Good Reputation

We cannot afford to overlook this important factor. Personal, social, and business values alike depend on good reputation. It is a very real business asset for a locality to have the reputation of producing good farm products and of disposing of them honestly. Buyers like to come into localities that enjoy good reputations. A few dishonest men may do much to hurt the name of a locality. This is not a question wholly of personal privilege; it is a matter of public concern as to whether we are fair dealing. A farmer, like every other citizen, must share the responsibility for maintaining the good reputation of his community.

In both city and country we are passing out of the stage of accepting existing conditions as inevitable and unchangeable, and we are deliberately setting ourselves at work to build communities in accordance with carefully thought out plans. For example, Chicago has a carefully worked out city plan, which has been drawn at the cost of many thousands of dollars and adopted by the city as a long-time program. It is gradually being accomplished and will involve expenditures aggregating many millions. When this plan has been carefully put into effect, Chicago will have become in many respects a changed city. City blocks are to be removed; great, radiating thoroughfares running from the city hall to all parts of the city are to be put in; the water fronts are to be changed; the railway connections are to be brought into a harmonious scheme; transportation routes, which are now exceedingly poor, are to made more nearly adequate. And along with the working out of a plan to change the physical appearance of the city, other bodies are at work to develop the educational, the artistic, the musical, the recreational, the charitable, and other phases of the city's life, viewing the city as a whole. Chicago, in common with a few other cities in America, is attempting consciously to fashion the city according to its own will, having in mind what will best enable the city to accomplish its work and at the same time make it a good place in which to live.

In just the same way has there developed a movement to build, deliberately and consciously, rural communities so that they shall be what the people want them to be. It is to be desired that the conception of a community as a definite thing to be taken in hand and moulded as a potter moulds a piece of clay — not so simple a process, but none the less deliberately — will continue to grow among us.

We Americans like to emphasize the importance of the personal development of our people — to encourage men to attain a higher degree of individual excellence and accomplishment. We have in mind that if the individual is all right and his offspring have good inheritance the neighborhood will be all right. We have not usually taken sufficient account of the effect of the other equally important factor, namely, the influence of the environment, or the

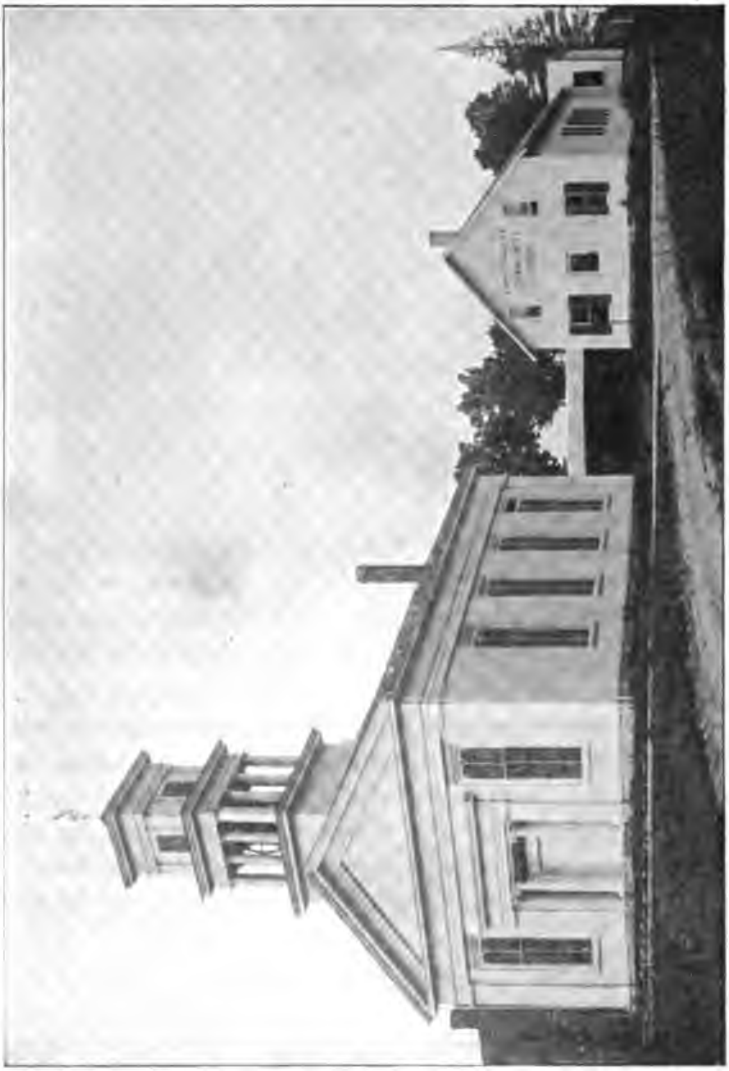

FIG. 37.— COUNTRY CHURCH AND COMMUNITY HOUSE.

community, on the individual. But neither inheritance nor environment will bear neglect when we are in the business of improving folks.

In trying to improve the character of the country communities in which we are to live, we need, therefore, to have in mind these two things: first, the making of men fit to live in the community with other men; second, the making of a community fit for men to live in. We must concern ourselves with the influence of the individual man on his community and how he discharges his obligations. We must equally concern ourselves with the influence of the community on the individuals who live there. We need to think of men as individuals seeking their own highest good; and we need also to think of them as social beings in their group or combined activities in which they affect one another. It takes good men to make good communities; and good communities will enrich the lives of the generations who live there.

INDIVIDUAL RESPONSIBILITY

It must therefore be plain to us if we care anything at all about the conditions under which we and our offspring must live, that the responsibility is ours to develop the highest possible community life by seeing to it that we do our share. This will never come about unless farmers fully and intelligently discharge their obligations to their communities. It is the neglected community that is the backward community and that yields neglected folks. Those country communities that are losing their populations and that have no power to bind people to them so that they will want to remain there permanently include those in which an over-large percentage of the population have failed to make a reasonable contribution to the common welfare, and the place therefore lacks holding power.

The idea of community building, which is the thought I want to emphasize at this point, has been tried with varying degrees of success in a number of places in this country. In an attempt to point out what may be done, Dr. Carver of Harvard University, formerly head of the Rural Organization Service of the United States Department of Agriculture, has proposed a comprehensive plan for the organization of a rural community. He proposes that there shall be in the community a general welfare committee made up of the officers and members of ten sub-committees. He has five sub-committees to look after the business interests of the community, and five to look after the social interests. Those to look after the business interests are as follows:

1. *Committee on Farm Production.* This committee gives all of its time to questions of how the farms can be made more productive, going into the whole question of soil handling, adaptation of crops, crop relations, and the like. It concerns itself with the economic basis of the community.

2. *Committee on Marketing Farm Produce,* to take up standardizing, branding, advertising, cooperative warehouses, packing sheds, creameries, etc., and to maintain expert selling agents or organizations.

3. *Committee on Securing Farm Supplies.*

4. *Committee on Farm Finance and Accounting,* to look after the provision of capital, farm loans, mutual companies, etc.

5. *Committee on Communication and Transportation,* concerned with the improvement of roads, of train schedules, telephones, and the like.

Then he proposes the following four committees to look after the social interests of the community:

1. *Committee on Education,* vocational, moral, and religious; to promote better schools, better curricula, clubs, libraries, and the like.

2. *Committee on Sanitation,* to look after all the health interests.

3. *Committee on Recreation.*

4. *Committee on Household Economics,* to aid in providing better facilities in the household to aid the woman in her work.

These nine committees represent all the interests or essential elements that go into the making of any rural community. And they all represent common interests that concern alike all who live in the community. This is an ideal, yet not wholly theoretical, scheme, and few communities will take it all at once. But it outlines the machinery for deliberately making our community a good community in which to live and to rear our families. And if we stop to consider we shall find that a good part of this machinery is actually at work in one place or another.

HIGH STANDARDS

Oliver Wendell Holmes said that the time to begin training a child is two hundred years before he is born. The conditions into which children are born have a great deal to do with the development of the children. We believe in pedigreed stock. We may come to believe in pedigreed communities. One of the best inheritances we can leave to future generations is a high standard of community life — one that is industrially, intellectually, politically, socially, morally, and religiously high and fine — because it is just these factors that are going to enter into the life of our farm children and our children's children to make them men and women of higher or lower standards.

When I was in South Carolina a few years ago attending the National Corn Exposition, I saw a lot of Indians wearing large badges with the words, "Rock Hill is a good town." That idea of pride in one's own town — one's own farm and community — is a great national asset. If we could all say, wherever we are, "We shall help to make this a good town, or a good farming community," and then go to work with a keen sense of our public responsibility, the business of making communities would soon be well under way. It is our common task. Fellow-service is the highest service.

The sociologists tell us that we are gradually passing out of the conflict and competitive stage of life into the cooperative. The spirit of working together is upon us. It is fundamental. We live not in spite of one another but because of one another. The duty of each of us to promote the common welfare, to discharge our obligations to the community, is as real and unchanging as the fact of life itself. We want the best in our farming communities. It is when wants are converted into action that results come. Those who would be worthy rural citizens must be sensitive and responsive to the calls of their community.

STATE OF NEW YORK

DEPARTMENT OF FARMS AND MARKETS

DIVISION OF AGRICULTURE

CHARLES S. WILSON, Commissioner

Bulletin 101

List of Commission Merchants Bonded and Licensed

For the Year July 1, 1917, to June 30, 1918

Pursuant to the Provisions of Article 12-a of the Agricultural Law as Amended

STATE OF NEW YORK

Department of Farms and Markets

The following is the list of the persons, firms or corporations that have been licensed to this date by this Department, as Commission Merchants for the year ending July 1, 1918, pursuant to the provisions of Chapter 457 of the Laws of 1913. They have all complied with the provisions of the law and have given a bond in the sum of $3,000 which has been duly approved. A number of applications for licenses are still pending and supplemental lists of persons licensed will be issued from time to time.

If shippers of farm produce to be sold on commission will make shipments of their products to the persons named in this list, they are assured of having the protection of the law for the regulation of the business of Commission Merchants. It is suggested that they mark such shipments "To Be Sold On Commission."

Sales of farm produce to commission merchants at a fixed price or a price to be agreed upon, are not sales on commission, and the above named law does not authorize this department to collect the amount due in case of non-payment; nor does it provide a penalty for such non-payment. All inquiries with respect to this law will be promptly answered. Send in the names and addresses of shippers in your locality to whom this circular might prove useful.

Many changes are liable to take place in this list due to death, retirement from business, discontinuance of commission business, change in business organization, revocation of license, bankruptcy, etc.

It is therefore advisable, before making a shipment of produce, that the shipper should ascertain if the party to whom he intends shipping same handles that kind of produce and in what quantities, and whether or not such party is duly licensed as a Commission Merchant and is still engaged in the sale of farm produce on commission.

It will greatly assist the Commission Merchant in handling produce expeditiously and in finding a good market therefor if the shipper will advise him of the kind, quality and approximate time of arrival of goods shipped or to be shipped.

All complaints should be made promptly and should be addressed to the Department of Farms and Markets, Bureau of Licenses, Albany, N. Y., and should contain a full statement of facts upon which same are based.

The licenses of all parties listed herein expire by limitation on July 1, 1918.

LICENSED COMMISSION MERCHANTS

File No.	Name	Organization	Address	Kind of produce handled
			ALBANY	
939	John Aiello & Brother	Copartnership	14–16 Grand St	Fruits and vegetables.
671	James J. Davis	Individual	10 Lyon Block	Fruit and vegetables.
427	Fitch, Cornell & Co	Corporation	314 Broadway	Butter and eggs.
278	Alexander McKown	Individual	11 and 12 Lyon block	Fruits and produce.
302	Rich & Evertsen	Copartnership	100 Hudson ave	Farm produce and fruits.
237	John J. Ryan	Individual	2 Grand st	Fruits and vegetables.
647	W. F. Ryan Co	Individual	6–7 Market square	Fruits, vegetables, poultry, butter and eggs.
235	William J. Skillicorn	Individual	102 Hudson ave	Poultry, butter, cheese and eggs.
234	James Stephens & Sons	Copartnership	Hudson ave. and Philip st	Fruits, vegetables and other farm products.
784	Swift & Co., Inc	Corporation	699–703 Broadway	Meats, poultry, eggs, dairy products, nuts and honey.
990	Wilson & Co	Corporation	Foot of Orange st	Vegetables, fruits, butter, eggs, cheese, poultry and calves.
236	Henry R. Wright	Individual	326–330 Broadway	Farm produce and provisions.
			AMSTERDAM	
943	R. Schuyler Ernest	Individual	22 Guy Park ave	Fruits and vegetables.
587	E. B. Roselle	Individual	22–24 West Main st	Farm produce and eggs.
990	Wilson & Co	Corporation	16 West Main st	Vegetables, fruits, butter, eggs, cheese, poultry and calves.
			BALLSTON SPA	
394	The Ballston Refrigerating Storage Co	Corporation	Bath st	Fruits, vegetables, butter, eggs and cheese.
			BINGHAMTON	
912	Russell Fruit Co	Corporation	142–144 State st	Fruits, vegetables, butter and eggs.
990	Wilson & Co	Corporation	94–96 Lewis st	Vegetables, fruits, butter, eggs, cheese poultry and calves.

BROOKLYN

193	Berrian Brothers	Copartnership	30 Wallabout market	Fruits and produce.
92	Daniel P. Boehm	Individual	204 Wallabout market	Calves, poultry and eggs.
480	August Henry Borchers	Individual	1032–1033 Wallabout market	Fruits and vegetables.
194	Ignatz Braun	Individual	137 West ave	Fruits and produce.
808	Breakstone Bros., Inc	Corporation	12 Cook st	Butter, cream, cheese and eggs.
125	Jacob Brooks	Individual	117 West ave	Fruits and produce.
910	Charles Busener	Individual	1014 Wallabout market	Fruits and vegetables.
870	The Busy Three	Copartnership	12 Wallabout market	Fruits and produce.
826	Seymour Clark	Individual	Foot of Clymer st. and D. L. and W. freight yards	Farm produce and hay.
10	Conron Brothers Co., Inc	Corporation	189–191 Fort Greene Place	Meats.
937	A. Cuneo & Co	Copartnership	1004 Wallabout market	Eggs, fruits and vegetables.
598	Danziger Brothers	Copartnership	144 West ave	Fruits and vegetables.
499	Dworetzky & Shlefstein	Copartnership	97–99 Varet st. and 162–164 Christopher ave	Butter and eggs.
999	Louis Esposito	Individual	1114–1116 Fleeman ave	Fruits and produce.
127	William K. Fehring	Individual	1028 Washington ave	Fruits and produce.
830	Fierro Brothers	Copartnership	1005 Wallabout market	Fruits and vegetables.
1010	J. M. Fierro & Co	Copartnership	1012 Wallabout market	Fruits and produce.
411	C. Fitter & Sons	Copartnership	11 Wallabout market	Butter and eggs.
126	Ernest A. Fitter	Individual	21 and 138 Wallabout market	Butter, cheese, eggs and lard.
747	Friedman Brothers	Copartnership	328 East ave	General farm produce.
983	James Gale	Individual	231 " B " st	Fruits and vegetables.
1009	James W. Gasteiger & Son	Copartnership	Foot of Amity st	Hay, straw and grain.
532	John H. Gerdts & Sons	Copartnership	27 Washington ave	Fruits and vegetables.
129	R. Gleichman & Co	Copartnership	115 Wallabout market	Fruits and vegetables.
132	L. W. Goetschius & Co	Copartnership	1015 Wallabout market	Fruits and produce.
725	Aaron M. Goodman	Individual	79 Seigel st	Butter, eggs and poultry.
574	Casper Herold's Sons	Copartnership	26, 142–143 Wallabout market	Fruits and vegetables.
788	Jill Brothers	Individual	1108 Fleeman ave	Wholesale produce.
832	Jochnowitz Brothers	Copartnership	419 Hart st	Butter, eggs and poultry.
247	Adam Joerger	Individual	122 West ave	Fruits and vegetables.
34	George Kastner & Co	Copartnership	31 Wallabout market	Butter, eggs and cheese.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			BROOKLYN — *continued*	
621	Keller & Freeman	Copartnership	205 Market ave	Calves, poultry and eggs.
213	D. Lippmann & Sons	Individual	1030 Wallabout market	Fruits and vegetables.
935	Losio & Capestro	Copartnership	1009 Wallabout market	Eggs, fruits, and vegetables.
401	Alexander McDicken Co	Corporation	18 Wallabout market	Fruits and vegetables.
874	Mantel & Washor	Copartnership	227–229 Market ave	General farm produce.
609	Peter Martori	Individual	9 Wallabout market	General produce.
610	David Mayer	Individual	152 Fort Greene place	Meats.
220	Louis Meklenburg	Individual	1016 Wallabout market	Fruits, vegetables and eggs.
786	Theodore H. Meyer	Individual	132 West ave	Fruits and produce.
281	Meyer Re & Co	Copartnership	1006–1007 Washington ave	Fruits and vegetables.
513	Miller & Bertholf	Copartnership	North 9th st and Kent ave	Hay, straw and grain.
338	Frank Montesani	Individual	1022 Washington ave	Fruits and vegetables.
89	Hyman Morris	Individual	1023 Wallabout market	Fruits and vegetables.
862	Joseph D. Novich	Individual	221 Flushing ave	Poultry, butter, eggs, calves and rabbits.
294	F. Petchesky & Sons	Copartnership	240 Market ave	Fruits and produce.
978	Louis Postinick	Individual	118 West ave	Fruits and vegetables.
766	William Protzmann & Co., Inc.	Corporation	229 Flushing ave. and 301 East ave. and 202 Market ave	Fresh meats, food products and poultry.
976	Rayher-Meldrum Co., Inc	Corporation	23–24 Wallabout market	General farm produce.
987	Fred Rieke	Individual	101–103 West ave	Fruit and produce.
51	James Rollo	Individual	1019 Wallabout market	Fruit and produce.
831	A. Rosenblum	Individual	52 Bushwick place	Produce.
158	Joseph Sabel	Individual	234 Market ave	Fruits and vegetables.
514	Charles Schaefer & Son	Copartnership	304 Meserole st., 84 Kent ave., 4 Wallabout market and foot of East 19th st	Hay and straw.

305	Schlick Brothers	Copartnership	104 West ave	Fruit and produce.
83	Henry J. Schroeder & Co	Copartnership	114 West ave	Fruits, vegetables and eggs.
311	L. J. Schukal	Individual	15–16 Wallabout market	Fruit, produce and vegetables.
633	Simensky Brothers	Copartnership	131–133 West ave	Fruit and produce.
682	Herman Springer	Individual	14 Washington ave	Fruit and produce.
963	Strauss & Adler, Inc	Corporation	120 North 6th st	Meats, poultry, farm and dairy products.
784	Swift & Co., Inc	Corporation	74–76 Atlantic ave., 100–106 North 16th st., Flushing and East aves., and 172, 182–184 and 201 Fort Greene place	Meats, poultry, eggs, dairy products, nuts and honey.
332	Thomas H. Townsend	Individual	126 West ave	Fruits and vegetables.
457	George E. Van Vorst, Inc	Corporation	1138 Flushing ave	Hay, straw and grain.
226	Sanford A. Vroman	Individual	86–88 Kent ave., Wallabout market, Bush Terminal and Brooklyn E. D. Terminal	Hay, straw and grain.
636	S. & W. Waldbaum	Copartnership	911 De Kalb ave	Butter and eggs.
736	Weinstein Brothers	Copartnership	230 Market ave. and 329 East ave	Fruit and general produce.
849	Morris Weisbart & Co	Individual	165 Fort Greene place	Meats.
990	Wilson & Co	Corporation	623 Pacific st., 212–214 Market ave., and 108 North 6th st	Vegetables, fruits, butter, cheese, eggs, poultry and calves.

BUFFALO

948	A. & G. Produce Co	Copartnership	100 West market st	All kinds of produce.
746	Morris Altman	Individual	161 Michigan ave	Fruit, produce, butter, eggs and poultry.
913	Andrew Baumbach	Individual	172 Michigan ave	Fruit, produce, butter, eggs and chickens.
259	Bert H. Bean	Individual	74–76 West Market st	Fruit and produce.
860	Barney Berman	Individual	94 West Market st	Butter, eggs, cheese poultry, fruit and produce.
314	Daniel Boosing	Individual	154 Michigan st	Fruits, vegetables and poultry.
933	Brace Butter and Egg Co	Individual	172 Michigan ave	Butter, eggs and dairy products.
377	F. Brennisen & Son	Copartnership	156-158 Michigan ave	Fruit, produce, butter, eggs, cheese and poultry.
833	Buffalo Distributing Co., Inc	Corporation	156 Michigan ave	Fruit and produce.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			BUFFALO — *continued*	
674	Buffalo Vegetable Marketing Co.	Corporation	49-51 East Market st	Fruits, vegetables and all farm produce.
128	William W. Burrell	Individual	180 Perry st	Fruits, vegetables, eggs, butter, cheese and poultry.
144	Melvin Carpenter	Individual	44 West Market st	Fruit and produce of all kinds.
955	Clay, Robinson & Co	Corporation	1073 William st	Live stock.
686	F. P. Coward & Son	Copartnership	82-86 West Market st	General farm produce.
957	The Dalton Meeks Co	Individual	Live Stock Exchange	Live stock.
969	Frank Deveso	Individual	80 West Market st	Fruits, vegetables, poultry and all farm produce.
142	John Dohn	Individual	96 West Market st	Eggs, butter, cheese, poultry and general farm produce.
517	Carleton S. Dudley	Individual	129 Michigan ave. and 174 Perry st.	Fruit and produce.
961	Dunning & Stevens, Inc	Corporation	Live Stock Exchange	Live stock.
143	Louis Engel	Individual	46 West Market st	Fruits, vegetables, poultry and eggs.
917	Eppolito Brothers	Copartnership	80 West Market st	Fruit and farm produce.
953	Ford & Holloway	Copartnership	Live Stock Exchange	Live stock.
131	Gleason & Lansing	Copartnership	150 Michigan st	Butter, cheese, eggs, beans and honey
888	Goldstein & Lippmann	Copartnership	165 Scott st	General produce, fruits and poultry.
936	David Gorsky	Individual	88 West Market st	Butter, eggs, poultry, fruits and vegetables.
970	J. L. Hanes & Co	Individual	Live Stock Exchange	Live stock.
371	Harlow Brothers	Copartnership	141 Michigan ave	Poultry, fruits and vegetables.
265	Albert Hendel	Individual	155 Michigan ave	Poultry, butter and eggs.
266	Charles H. Hickman	Individual	98 West Market st	Poultry, butter, eggs, fruit and general farm produce.
643	Horn & Zimmer	Copartnership	58-60 West Market st	Fruits and vegetables.

267	George Hornung & Sons Co	Corporation	54 West Market st	Fruits, vegetables, poultry, butter, eggs, cheese, game, hay, flour and grain.
843	Frank M. Howe	Individual	80 West Market st	Butter, eggs and farm produce.
264	Frank X. Huber	Individual	40 West Market st	Country produce.
954	Imhoff, McCarthy & Co	Copartnership	Live Stock Exchange	Live stock.
688	Kendrick & Johnson	Copartnership	64–66 West Market st	Fruits, vegetables and poultry.
269	Kurts Brothers	Copartnership	90 West Market st	Fruits, vegetables, poultry and eggs.
965	George W. Langdon	Individual	963 William st	Live stock.
920	Layman & Truesdale, Inc	Corporation	135–137 Michigan ave	Butter, eggs, poultry, fruit and produce.
781	Leon Brothers, Inc	Corporation	178 Michigan st	Farm, vineyard and orchard fruits.
922	Edward F. McDonald	Individual	42 West Market st	Fruit and produce.
285	M. and S. Produce Company	Copartnership	171 Scott st	Fruits, vegetables, poultry and eggs.
960	Meeks, Boren & Miller, Inc	Corporation	Live Stock Exchange	Live stock.
288	National Fruit & Produce Co	Copartnership	173 Perry st	Fruits and vegetables.
921	Penfold & Peppard Co., Inc	Corporation	167 Scott st	General farm produce.
256	Potter & Williams Co., Inc	Corporation	144–146 Michigan ave	Fruits, produce and poultry.
1007	Queen City Marketing Co	Corporation	174 Michigan ave	Fruits, vegetables and poultry.
962	Ransom, Mansfield & Co	Copartnership	Live Stock Exchange	Live stock.
299	Rea & Witzig	Copartnership	104–106 West Market st	Fruits, vegetables, poultry, eggs, cheese and butter.
950	Rice & Whaley, Inc	Corporation	Live Stock Exchange	Live stock.
1008	Rodenberg Produce Co	Copartnership	42 West Market st	All kinds of farm produce.
296	B. D. Rogers Sons	Copartnership	102 West Market st	Poultry, fruit and vegetables.
297	Rothenberg Bros	Copartnership	176 Perry st	General farm produce.
951	Sadler, Rorick & Co	Corporation	Live Stock Exchange	Live stock.
1000	Nathan Satuloff	Individual	96 West Market st	General farm produce.
261	Satuloff Brothers	Individual	145 Michigan ave	Live poultry and produce.
306	Emil Adam Sauer & Son	Individual	155 Grey st	Butter, eggs and produce.
309	John E. Schintzius	Individual	38 West Market st	Fruit and produce.
977	Frank Sidle & Co	Individual	963 William st	Live stock.
980	N. L. Smith Co., Inc	Corporation	48 West Market st	All kinds fruit and produce.
308	Snyder & Co	Individual	62 West Market st	Fruits, butter, eggs and poultry.
952	Stacy, Bement & Beadle, Inc	Corporation	Live Stock Exchange	Live stock.
307	Fred F. Stone	Individual	62 West Market st	Eggs, butter, cheese, live and dressed poultry.
784	Swift & Co., Inc	Corporation	85–91 East Market st	Meats, poultry, eggs, dairy products, nuts and honey.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			BUFFALO — *continued*	
972	Swope, Hughes, Waltz & Benstead Commission Co	Corporation	Live Stock Exchange	Live stock.
334	F. J. Trautman's Sons	Copartnership	52 West Market st	Butter, eggs, cheese, chickens and farm produce.
333	Walter A. Tuttle	Copartnership	169 Scott st	Poultry and eggs.
404	Fred Unger	Individual	175-177 Perry st	All farm produce.
329	Vishion & Co	Individual	68 West Market st	General farm produce.
767	Frank E. Wattles & Brother	Copartnership	148 Michigan ave	Butter, eggs, poultry and produce.
551	J. B. & G. M. Wattles' Son	Copartnership	152 Michigan st	Butter, eggs, cheese and poultry.
157	Wax & Sugarman	Copartnership	56 West Market st	Butter, eggs, poultry, fruits and vegetables.
324	F. M. Welch & Co	Copartnership	139-141 Michigan st	Fruits, vegetables, poultry and eggs.
2	W. H. West Co	Individual	Live Stock Exchange	Live Stock.
322	George R. Whitney	Individual	154 Michigan ave	Fruit, produce, vegetables, poultry, eggs and butter.
323	William C. Will	Individual	163 Scott st	Fruit, produce, vegetables, poultry and eggs.
956	Williamson Commission Co	Copartnership	16 Live Stock Exchange	Live stock.
966	Windsor Brothers	Copartnership	963 William st	Live stock.
286	Zaubitzer & Miller	Copartnership	46 West Market st	Eggs, fruit, vegetables, butter and poultry.
			CEDAR HILL	
239	Barent S. Winne	Individual		Hay and straw.
			COHOCTON	
541	N. Y. & N. J. Produce Co	Corporation		General farm produce.

			COHOES	
504	Charles Rogers & Son	Copartnership	65 Canvass st	Butter, eggs, cheese, beans and honey.
			CORNING	
148	Empire Produce Co	Corporation	71 West Market st	Butter, eggs and all kinds of farm produce.
784	Swift & Co., Inc	Corporation	22–24 East Tioga st	Meat, poultry, eggs, dairy products, nuts and honey.
			CORTLAND	
912	Russell Fruit Co	Corporation	5 Monroe Heights	Fruits, vegetables, butter and eggs.
			COXSACKIE	
457	George E. Van Vorst, Inc	Corporation	West Shore R. R. Station	Hay, straw and grain.
			DANSVILLE	
148	Empire Produce Co	Corporation	207 Main st	Butter, eggs and all kinds of farm produce.
			ELMIRA	
148	Empire Produce Co	Corporation	316–318 Carroll st	Butter, eggs and all kinds of farm produce.
105	Clarence W. Ferguson	Individual	231–235 West Water st	Butter, eggs, cheese, fruits, vegetables and poultry.
241	Frank A. Keeton	Individual	123 and 151 Baldwin st	Fruits, vegetables and oysters.
878	Post, Volker & Co	Corporation	160 Lake st	Fruits, produce, butter and eggs.
784	Swift & Co., Inc	Corporation	Railroad ave	Meat, poultry, eggs, dairy products, nuts and honey.
			FLUSHING	
784	Swift & Co., Inc	Corporation	32 Broadway	Meat, poultry, eggs, dairy products, nuts and honey.
			GENEVA	
784	Swift & Co., Inc	Corporation	40 Middle st	Meat, poultry, eggs, dairy products, nuts and honey.
			GLENS FALLS	
784	Swift & Co., Inc	Corporation	Prospect and Maple sts	Meat, poultry, eggs, dairy products, nuts and honey.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			GROTON	
993	A. U. Berberich	Individual	Park st	Hay, grain vegetables, poultry, eggs and live stock.
			HAVERSTRAW	
784	Swift & Co., Inc	Corporation	New Main st	Meat, poultry, eggs, dairy products, nuts and honey.
			HORNELL	
148	Empire Produce Co	Corporation	60 Canisteo st	Butter, eggs and farm produce.
784	Swift & Co., Inc	Corporation	Canisteo st	Meat, poultry, eggs, dairy products, nuts and honey.
			HUDSON	
146	Charles C. Fingar	Individual	744 Warren st	Fruits and vegetables.
328	C. A. Van Deusen Co	Corporation	15 North 7th st	Butter, eggs, cheese, maple sugar and syrup.
			ITHACA	
268	Jester W. Hook	Individual	113–115 South Tioga st	Butter, eggs, vegetables and fruits.
784	Swift & Co., Inc	Corporation	Seneca and West Port sts	Meat, poultry, eggs, dairy products, nuts and honey.
			JAMESTOWN	
784	Swift & Co., Inc	Corporation	33 Institute st	Meat, poultry, eggs, dairy products, nuts and honey.
			KINGSTON	
318	Everett & Treadwell Co	Corporation	534–536 Broadway and 128–132 North Front st	Butter, eggs, maple sugar and syrup.

		LINLITHGO		
538	Washburn & Co	Individual		Hay and straw.
		MIDDLETOWN		
784	Swift & Co., Inc	Corporation	20-22 Henry st	Meat, poultry, eggs, dairy products, nuts and honey.
		NEWBURGH		
784	Swift & Co., Inc	Corporation	L. E. & W. Railway	Meat, poultry, eggs, dairy products, nuts and honey.
		NEW ROCHELLE		
784	Swift & Co., Inc	Corporation	131 Hugenot st	Meat, poultry, eggs, dairy products, nuts and honey.
		NEW YORK		
108	Bernard Abel Co., Inc	Corporation	196 Duane st	Fruits and vegetables.
886	C. F. Adams & Co	Copartnership	13 Harrison st	Butter, eggs and cheese.
905	J. P. Agalloco & Co	Copartnership	297 Washington st	Fruits and vegetables.
462	Carl Ahlers	Individual	5 Worth st	Butter, eggs and cheese.
373	William L. Allen & Co	Copartnership	81 North Moore st	Domestic dried fruits.
577	George Allison & Co., Inc	Corporation	298 Washington st., Penn. R. R. Docks, and Old Dominion S. S. Docks	Meats, poultry, vegetables, fruits, honey, nuts, butter, eggs and cheese.
168	E. S. Alpaugh & Co	Corporation	16 Bloomfield st	Poultry and meats.
573	L. Amendola & Co	Copartnership	294 Washington st	General produce.
559	American Cranberry Exchange	Corporation	105 Hudson st., and 188 Chambers st.	Cranberries.
106	John Angleman	Individual	108 Murray st	Farm produce.
1	W. D. Appleget & Co., Inc	Corporation	50-58 Thompson ave	Live and dressed poultry, calves, pork, spring lambs and eggs.
469	Archdeacon & Co	Copartnership	100 Murray st	All farm produce except hay, straw and grain.
805	Armour & Co	Corporation	Greenwich & Duane sts	Butter, eggs, cheese and poultry.
998	Armstrong & Hesse, Inc	Corporation	321 Greenwich st	Butter, eggs and cheese.
996	Associated Fruit Co	Corporation	204 Franklin st	Fruits and vegetables.
827	B. Baff & Son	Copartnership	60-64 Thompson ave	Live and dressed poultry and eggs.
947	Ed. Bahrenburg Co., Inc	Corporation	103 Murray st	Fruits and produce.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK — *continued*	
104	Balfour Brothers	Copartnership	850 Washington st	Butter and eggs.
394	The Ballston Refrigerating Storage Co	Corporation	90 West Broadway	Fruits, vegetables, butter, eggs and cheese.
103	S. Morgan Barber	Individual	403 East 103rd st	Butter, eggs, cheese and produce.
426	Henry Behrman & Sons	Copartnership	257–259 Washington st	Butter, eggs, cheese and poultry.
1003	Ottavia Belvedere	Individual	2026 First ave	Fruit and produce.
428	Belvedere Brothers	Copartnership	400 East 105th st. and 2034–2036 First ave	Fruit and general produce.
690	A. Bennett & Co., Inc	Corporation	103 Park place	Fruits and vegetables.
171	Albert Berg	Individual	158th st. and Morris ave	Country produce.
350	Berkowitz & Schwartz	Copartnership	121 Warren st. and 121–123 Attorney st	Fruit and farm produce.
190	J. A. Bernholz & Sons	Individual	30 Harrison st	Eggs, butter, cheese and poultry.
98	James A. Betts	Individual	292 Washington st	Fruits and vegetables.
370	John M. Blackburn	Individual	276 Washington st	Fruit and produce.
110	Max Blum Co., Inc	Corporation	142 Reade st	Butter, eggs, cream and cheese.
382	Bodine & Hinrichs	Corporation	26–30 Lawton ave	Country produce.
3	Daniel P. Boehm Co	Corporation	345 Washington st	Poultry and eggs.
109	Henry Brautigam	Individual	142 Park place	Fruits and vegetables.
808	Breakstone Brothers, Inc	Corporation	344 Greenwich st	Butter, eggs, cream and cheese.
992	H. J. Breden, Inc	Corporation	1987–1989 First ave	Farm produce.
891	Harry Brenneis	Individual	20 Produce House	Fruits, vegetables and eggs.
989	R. Brenner & Son	Copartnership	358 Greenwich st	Butter, cheese and eggs.
248	Henry Brinker & Co	Copartnership	199 West st	Fruits and vegetables.
348	C. M. Britten Co	Copartnership	22 Harrison st	Butter and eggs.

4	Rudolf Brossman	Individual	24 Harrison st	Butter, eggs and cheese.
755	Frederick F. Brown	Individual	307 Greenwich st	Butter, eggs and cheese.
5	George G. Brown	Individual	36 Bloomfield st	Poultry and meats.
941	Harold L. Brown Co., Inc	Corporation	139 Reade st	Butter, eggs, cheese and poultry.
879	Bryan-Duvall Co., Inc	Corporation	105 Hudson st	Butter and eggs.
881	Buhl-Mills Co	Corporation	132 Front st	Imported tropical fruits.
107	H. Burlew & Co	Individual	119 Warren st	Fruit and produce.
756	Charles H. Burmeister & Co	Individual	134 Reade st	Butter, eggs and cheese.
552	Junius C. Bush	Individual	39 Cortlandt st	Hay and straw.
440	James Butler, Inc	Corporation	390 Washington st	Butter, eggs, cheese and produ
901	H. Butwenig & Co	Copartnership	No. 7 Bronx Produce House	Fruits and vegetables.
605	Michelangelo Calderone	Individual	2010 First ave	Fruit and produce.
111	William A. Camp & Co., Inc	Corporation	361 Washington st	General farm produce.
897	W. A. Capps Co	Individual	130 Park place	Fruit and produce.
395	The J. Carneval California Produce & Commission Co., Inc.	Corporation	111 Warren st	California artichokes, beans and peas.
439	Teresina Carobine	Individual	1983 First ave	Fruits and vegetables.
178	T. Carobine & Co	Copartnership	120 Warren st	Fruits and vegetables.
159	Isaac W. Carr & Co	Individual	204 Franklin st	General farm produce. Potatoes a specialty.
6	J. Pratt Carroll, Inc	Corporation	267–269 Washington st	Fruits and vegetables.
550	Carscallen & Cassidy, Inc	Corporation	Produce Exchange	Hay, straw and grain.
529	L. Casazza & Co	Copartnership	254 Washington st	Fruit and produce.
850	Guiseppe Castellano	Individual	97 Murray st	Fruit and produce.
985	Guiseppe Cavallaro	Individual	202 Franklin st	Fruit and produce.
639	A. Cavagnaro	Individual	224–226 Washington st	Fruits.
1005	Chelsea Fruit Co., Inc	Corporation	334 Washington st	Fruits and vegetables.
825	William H. Clark	Individual	K-2 Produce Exchange	Hay and grain.
429	Clark & Brown Hay Co	Corporation	970 Cauldwell ave	Hay and straw.
638	R. E. Cochran Co., Inc	Corporation	132 Park place	Fruit and produce.
8	Robert T. Cochran & Co	Copartnership	290 Washington st	Fruit, poultry and produce.
892	Cohen Brothers	Copartnership	390 11th ave., 33rd st. and 11th ave., Barclay st. and No. River, Pier No. 17, Pier No. 29 No. River, and 37th st. and 11th ave	Potatoes, onions, cabbage and apples.
765	S. Cohen & Co	Copartnership	12 Ludlow st	Fruit and produce.
347	William H. Cohen & Co	Individual	229 Washington st	Poultry, meat, eggs, nuts and fruit.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK — *continued*	
413	Charles Collins Co	Copartnership	197 West st., and 52 Jay st	Live poultry exclusively.
813	Albert T. Conord	Individual	293 Washington st	Mushrooms and other hot house products.
10	Conron Brothers Co., Inc	Corporation	40 10th ave., 643–645 Brook ave., and 131st st. and 12th ave	Meats.
761	John Corell & Co	Copartnership	334 Washington st	Dressed poultry.
355	Frank Couch & Co	Copartnership	346 Washington st	Fruit and vegetables.
859	F. M. Coughlan & Son, Inc	Corporation	172 Duane st	Butter, eggs, cheese, poultry and potatoes.
359	Covert & Cottrell	Copartnership	2001 First ave	Fruits, vegetables and eggs.
113	Covert Brothers	Copartnership	299 Washington st	Fruit and produce.
115	John C. Crate	Individual	306 Washington st	Fruits and vegetables.
525	J. W. Crawford	Individual	8 Harrison st	Eggs.
872	Cregan & Mallory	Copartnership	197 Reade st	Fruit and produce.
263	D. Crossley & Sons, Inc	Corporation	204 Franklin st	Apples, pears, oranges, prunes, onions and potatoes.
727	Cuneo Brothers	Individual	230 Washington st	Fruit, produce and nuts.
346	Cunningham Brothers	Copartnership	104 Barclay st	Beef, mutton and pork.
934	Cuomo & De Feo	Copartnership	390 Eleventh ave	Fruit and produce.
810	Curran, Robertson & Jones, Inc.	Corporation	178 Chambers st	Fruits and vegetables.
926	J. G. Curtis & Son	Copartnership	312 West 60th st	Sheep, cattle, lambs, calves and hogs.
262	Robert C. Curtis	Copartnership	189 Reade St	Fruits and vegetables.
197	George E. Cutler	Individual	331 Greenwich st	Eggs.
597	E. H. Dare & Co	Copartnership	8 Broadway	Hay, oats, corn, rye, alfalfa, flour, bran and wheat in car lots.
231	W. J. & S. H. Davenport	Copartnership	130 Park place	Fruit and produce.
665	Andrew Davey, Inc	Corporation	350 Greenwich st	Butter and eggs.
12	W. O. & H. W. Davis, Inc	Corporation	100 Barclay st	Fruit and produce.

13	Dennis & Herring, Inc	Corporation	47–55 Thompson ave	Dressed calves, pigs, poultry and eggs.
715	Dennis, Kimball & Pope, Inc	Corporation	202–204 Franklin st	Fruit and produce.
14	S. DeNoyelles & Co	Copartnership	Lawton & Hewitt aves	Calves, lambs, poultry, eggs and butter.
523	Descalzi Brothers Co., Inc	Corporation	238 Washington st	Farm and orchard fruits and vegetables.
623	DeWinter & Stewart, Inc	Corporation	321 Washington st	Dressed poultry.
354	W. C. Deyo & Brother, Inc	Corporation	859–861 Washington st	Fruits and vegetables.
434	Edward A. Dillenbeck	Individual	601 West 33rd st	Hay, straw, grain and country produce.
249	C. I. & M. Dingfelder	Copartnership	253 Washington st	All kinds of farm produce.
134	R. W. Dixon & Son	Copartnership	266 Washington st	Fruits and vegetables.
1002	James Doran, Inc	Corporation	No. 2 Bronx Produce House	Fruit and produce.
15	John Doscher & Co	Copartnership	133 Reade st	Butter, eggs and cheese.
425	W. S. Douglas & Co	Individual	137 Reade st	Butter, eggs and cheese.
991	John T. Dreelan	Individual	312 West 60th st	Live stock.
762	Droste & Snyder, Inc	Corporation	177 Duane st	Butter, eggs and cheese.
208	W. J. Duncan & Co	Individual	251 Washington st	Fruit and produce.
173	N. Durham & Sons	Copartnership	313 Washington st	Dressed poultry and eggs.
449	Edward B. Dusenberry	Individual	601 West 33rd st	Hay and straw.
497	Dusenbery & Co	Copartnership	120 Liberty st	Hay, straw and farm produce.
118	Lewis Ebert & Sons, Inc	Corporation	151 Reade st	Butter, eggs and cheese.
853	Egan, Fickett & Co., Inc	Corporation	54 Harrison st	Domestic fruits and vegetables.
412	Egbert & Case	Corporation	11 Jay st	Butter and eggs.
16	John F. Ehlers	Individual	866 Washington st	Fruits and vegetables.
518	William Ellis	Individual	51 Little West 12th st	Fruits, vegetables and dairy products.
119	William W. Elzea	Individual	327 Washington st	Butter, eggs and calves.
797	Empire Produce & Export Co	Corporation	247 Washington st	Fruit and vegetables.
17	Enyard & Godley, Inc	Corporation	171 Duane st	Butter, eggs and cheese.
776	Farmers Commission House, Inc.	Corporation	27 Harrison st	Calves, lambs, poultry and eggs.
19	W. J. Farrell Co., Inc	Corporation	325 Washington st., and 427 West 14th st	Dressed poultry and eggs.
876	Ferrone & Lo Dolce Co	Copartnership	188 Reade st	General farm produce.
137	George F. Fish, Estate of	Individual	183 Reade st., and 410 West 14th st	Celery and vegetables.
387	S. Fish & Co	Copartnership	260 Washington st	Fruit and produce.
817	Fisher & Overocker	Copartnership	601 West 33rd st	Hay and straw.
427	Fitch, Cornell & Co	Corporation	16–18 Jay st	Butter and eggs.
121	Fleck & Hillman, Inc	Corporation	45–51 Loew ave	Live poultry only.
232	Emil Fleischl & Son	Copartnership	514 Westchester ave	Butter, eggs and cheese.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK — *continued*	
416	Florida Brokerage Co	Copartnership	202–204 Franklin st	Fruits and vegetables.
836	Florida Produce Co	Individual	286 Washington st	Fruit and produce.
582	Fox River Butter Co	Corporation	78–82 Hudson st	Butter, eggs, cheese and other dairy products. Manufacturers of creamery butter.
463	J. H. Francke & Co	Copartnership	239 Washington st	Fruits and vegetables.
95	Sol Frankel, Inc	Corporation	50–52 Loew ave	Poultry.
995	Franklin Fruit Co	Copartnership	204 Franklin st	Fruits.
464	S. H. & E. H. Frost	Corporation	319 Washington st	Fruits and vegetables.
21	Frost & McNab	Copartnership	42 Harrison st	Fruits and vegetables.
85	Furman & Page	Corporation	112 Warren st	Fruit and produce.
873	James Gallagher's Sons	Copartnership	170–171 West st	Fruit and produce.
139	Bernard Gallup	Individual	132nd st and Willis ave	General farm produce.
22	William Gamble & Co	Corporation	292 Washington st	Fruits and vegetables.
380	P. Garguilo & Brother	Individual	282 Washington st	Fruits and vegetables.
906	E. C. Gedney Co	Copartnership	18 Broadway	Tropical fruits and vegetables.
572	The Harry G. Gere Co., Inc	Corporation	C-5 Produce Exchange	Hay.
396	Thomas D. Griffin & Co	Individual	189 Chambers st	All kinds of farm produce.
77	Henry H. Grimm & Co	Individual	93 Park Place	Fruit and produce.
924	A. Grossman & Co	Copartnership	153 Reade st	Butter, eggs, cheese and poultry.
476	Gude Brothers Kieffer Co	Corporation	21 Jay st	Butter, eggs and cheese.
250	Hait & McNicholas	Copartnership	843 Washington st	Fruits and vegetables.
179	Michael C. Hall	Individual	98 Park Place	Fruit and produce.
959	J. Hamburger & Co., Inc	Corporation	188 West st	Fruits and vegetables.
251	The J. Hamburger Co	Copartnership	264 Washington st	Fruit and produce.
210	George P. Hammond & Co	Individual	40 Little West 12th st	Fruit, produce and eggs.

25	Hance Brothers Co	Corporation	32 Bloomfield st	Poultry, calves, lambs, pork, furs and skins.
984	Hanna & Eismann	Copartnership	868–870 Washington st	Vegetables and dairy products.
26	Horace B. Hanson	Individual	180 Reade st	Fruit and produce.
72	G. Z. Hawk & Son Co., Inc	Corporation	34 Loew ave	Live poultry.
851	Alexander D. Heard	Individual	95 Park place	Fruit and produce.
716	Harry Heilmann	Individual	518 Westchester ave	Calves and eggs.
802	Heller Brothers	Copartnership	303 Washington st	Fruit and produce.
975	Charles S. Hendrickson	Individual	326 Washington st	Fruit and produce.
895	W. P. Hentze	Copartnership	361 Greenwich st	Butter and eggs.
211	C. M. Herring & Co	Corporation	23–27 Thompson ave	All country produce.
212	Heuser & Vreeland	Copartnership	207 Duane st	Farm produce.
652	Fay D. Hewitt	Individual	Railroad Terminals	Hay and straw in carload lots only.
974	The Hills Brothers Co	Corporation	375 Washington st., and 213–215 West st	Fruits and vegetables.
253	George F. Hinrichs, Inc	Corporation	33 Hewitt ave., 331–333 Washington st., and 131st st. and 12th ave	Poultry, eggs, calves and farm products.
942	W. J. Hinrichs Co., Inc	Corporation	423 West 14th st	Poultry and calves.
606	L. Hirshberg & Co	Copartnership	345 Washington st	Farm produce and fruits.
749	Jacob Hoehn	Individual	295 Washington st	Poultry and eggs.
971	Sam D. Hollis	Individual	615 West 59th st	Live stock.
420	Honig & Klein	Copartnership	8 Harrison st	Butter, eggs and cheese.
447	Henry S. Hotaling	Individual	601 West 33rd st., and all Railroad Terminals	Hay and straw.
417	Charles B. Hovey	Individual	33–37 Thompson ave	Country produce.
461	E. C. Howell Co	Individual	250 Washington st	Fruit and vegetables.
734	Theo. P. Huffman & Co	Individual	638–650 West 34th st., and Room F-21 Produce Exchange	Hay, grain and feed.
925	Walter R. Hume	Individual	60th st. and No. River	Live stock.
450	Henry L. Hunter	Individual	132d st. and Lincoln ave	Farm produce.
835	W. A. Hutcheson & Co., Inc	Corporation	78 Wall st	Fruits and vegetables.
28	J. W. Hutchinson & Co	Individual	315 Washington st	Fruit and vegetables.
930	Joe Imperato	Individual	2009 First ave	Fruit and produce.
165	Imperato Brothers & Co., Inc	Corporation	2019 First ave	Fruit and produce.
799	The L. Janicke Co	Copartnership	270 Washington st	Fruits and vegetables.
254	Jelliffe, Wright & Co	Individual	284 Washington st., 18–26 Grace ave., and N. Y. Stock Yards, 60th st. and North River	Farm produce.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK — *continued*	
410	H. B. Jenkins & Co	Copartnership	601 West 33rd st	Hay and straw.
751	Jewell Brothers, Inc	Corporation	31 Loew ave	Poultry, butter, eggs, lambs, calves, etc.
845	Jewell, Koenig & Co., Inc	Corporation	56–64 Loew ave., and 3–4–5–6 Thirteenth ave	Live poultry exclusively.
255	Martin Johnson & Son	Individual	280 Washington st	Fruits and vegetables.
438	T. W. Johnson & Co	Corporation	325 Washington st	Dressed poultry and eggs.
229	Hugo Josephy & Son	Copartnership	178–180 Chambers st., and Corner Loew and Lawton aves	Dressed poultry and eggs.
32	George W. Judd	Copartnership	278 Washington st	Fruits, dressed poultry, produce and dressed calves.
945	Keusch Grain Co., Inc	Corporation	8 Broadway	Mill feeds.
35	J. H. Killough & Co	Copartnership	157 West st	Fruits and vegetables.
315	C. H. & C. W. Kimball	Copartnership	202–204 Franklin st	Fruits and vegetables.
270	Jacob M. Klein	Individual	311 Washington st	Poultry and eggs.
177	Knapp Brothers & Co	Individual	106 Murray st	Fruit and farm produce.
877	A. & S. Kornblum	Copartnership	113–117 Warren st	Fruit and produce.
36	Kossar & Co., Inc	Corporation	42–48 Loew ave	Live poultry.
691	Krakaur Poultry Co., Inc	Corporation	66 Loew ave., and 21–23–25 Thirteenth ave	Live poultry.
432	Krone Brothers	Copartnership	245 Washington st	Fruits and vegetables.
533	Nathan Kronman & Co	Corporation	349–355 Washington st	Fruits and vegetables.
136	Kunz, Marsh & Pendleton, Inc	Corporation	170 Reade st	Fruit and produce.
644	Kurtin & Kurtin	Copartnership	305 Greenwich st	Butter and eggs.
37	Vincent R. Lamia	Individual	202 Franklin st	Fruit and produce.
38	John K. Lasher & Brother	Corporation	11 Harrison st	Butter, eggs and cheese.
904	Lass & Cohen	Copartnership	450 West 14th st	Dressed poultry and calves.

271	A. Lauro & Brother	Copartnership	245 Washington st	Fruits, vegetables, eggs and poultry.
156	P. Lawless' Sons	Individual	53 Little West 12th st	Fruits and vegetables.
361	Leigh & Everitt	Copartnership	297 Washington st	General produce.
275	August J. Lemkau Co., Inc	Corporation	41 Jay st	Celery and lettuce.
940	Sam Levy	Individual	1962 First ave	Fruit and produce.
39	G. H. Lewis & Son, Inc	Corporation	47 Grace ave	Poultry and produce.
40	Linders, Ackhart & Co., Inc	Corporation	288 Washington st	Plants, butter, cheese and other farm and dairy products.
560	G. Lippmann & Co	Individual	110 Warren st	Fruit and produce.
375	J. & G. Lippmann, Inc	Corporation	338 Washington st., and 132d st. and Lincoln ave	Fruits and vegetables.
820	Maurice A. Lippmann	Individual	258½ Washington st	Fruits and vegetables.
403	W. H. Liscomb & Co	Individual	124-126 Park place	Fruits and vegetables.
984	I. Litvin & Son	Copartnership	34 Jay st	Dressed poultry, butter and eggs.
474	George Loblein & Co	Individual	172 Reade st	Fruits and vegetables.
274	Clifford C. Lockwood	Individual	305 Washington st	Fruits and vegetables.
982	James Lo Dolce & Co	Individual	299 Washington st	Fruit and produce.
273	Isaac Loewenthal	Individual	287 Reade st	Fruits and vegetables.
388	James Long, Inc	Corporation	188 Warren st	General farm produce.
809	S. S. Long & Brother, Inc	Corporation	102-106 Warren st., and 856 Washington st	Butter, eggs and cheese.
228	E. P. Loomis & Co	Copartnership	119 Barclay st	Fruit and produce.
764	Frederick F. Lowenfels & Sons	Copartnership	348 Greenwich st	Butter, eggs and cheese.
923	Lund & Funk, Inc	Corporation	504 West 38th st	Farm, produce. Potatoes a specialty.
155	W. B. Lunn's Sons	Copartnership	304 Greenwich st	Butter and eggs.
431	Lynch & Branch	Copartnership	108 Murray st	Fruits.
352	Edward Lyons & Sons	Copartnership	408 Eleventh ave., and railroad yards and piers	Fruits and vegetables.
437	McAllen & Nuttall	Copartnership	601 West 33rd st	Hay, straw and grain.
402	Hugh McCarren, Jr	Individual	163 West st	Fruit and produce.
44	Peter McClees	Individual	300 Washington st	Fruits and vegetables.
279	McCormick, Hubbs & Co	Corporation	279 Washington st	West India and Florida fruits and produce.
890	Max Mandel & Co	Individual	164 Attorney st., and 337 Washington st	Fruit and produce.
547	Philip Mandelker	Individual	158 Reade st	Butter, poultry and eggs.
180	Manniello Bros. & Mayrsohn	Copartnership	185 Reade st	Fruit, produce and raw furs.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK — *continued*	
217	Andrew C. Martin	Individual	282 Washington st	Fruit and produce.
1004	Thomas J. May Produce Co	Corporation	6 Harrison st	Butter and eggs.
218	James Maye	Individual	304 Washington st	Fruits and vegetables.
610	David Mayer	Individual	523–525 West st., and 520 Westchester ave	Meats.
366	F. S. Maynard & Son	Individual	218 Washington st	Fruits.
386	Maynard & Child	Copartnership	100 Hudson st	Apples, pears and onions.
871	Charles F. Meany	Individual	193 Reade st	Onions, lettuce and celery.
356	Charles P. Mecabe & Son	Copartnership	17 Jay st	Butter, eggs and cheese.
219	Aron Mehler	Individual	356 Greenwich st	Butter, eggs and poultry.
864	Melady Grain Co	Copartnership	8 Broadway	Grain and seeds.
822	Menke & Fechtman, Inc	Corporation	56–60 Hewitt ave	Poultry.
400	A. E. Meyer & Co	Corporation	134 Park place	Fruits and vegetables.
90	H. G. Miles & Co	Copartnership	315 Washington st	Fruits and vegetables.
875	Arthur Miller	Individual	330 Washington st	Cantaloupes.
513	Miller & Bertholf	Copartnership	33rd st. and 11th ave	Hay, straw and grain.
730	Miller-Cummings Co., Inc	Corporation	330 Washington st	Fruit and produce.
581	Monfort & Houck	Individual	95 Murray st	Fruits, vegetables and berries.
669	A. H. Moses & Sons	Copartnership	256 Washington st	Fruit and produce.
175	Mottus Brothers	Copartnership	25–27 Thirteenth ave	Poultry, beef and pork.
419	W. H. Mowerson & Son	Copartnership	38–48 Lawton ave	Lambs, veal, poultry and eggs.
928	Andrew Mullen	Individual	N. Y. Stock Yards, 312 West 60th st.	Cattle, sheep, lambs, calves and hogs.
543	John E. Murray	Individual	136 Liberty st	Hay, straw and grain.
490	Samuel Nagle	Individual	West Washington Market	Dressed sheep, calves, lambs and poultry.

861	D. J. Napoli & Co	Individual	132d st. and Lincoln ave., and 18 Bronx Produce House	Fruit and produce.
472	Natale & Frank	Copartnership	250 Washington st	Fruit and produce.
929	Nelson & McCabe	Copartnership	312 West 60th st	Cattle, sheep, lambs, calves and hogs.
282	J. Neugeboren & Sons	Copartnership	19–21 Harrison st	Butter and eggs.
612	New York Independent Meat Co.	Corporation	2302 Twelfth ave. and 131st st	Meats.
541	New York and New Jersey Produce Co	Corporation	601 West 26th st., 132d st. and Lincoln ave., 28th st. and Eleventh ave., 33d st. and Eleventh ave., and 26th st. and Eleventh ave	General farm produce.
187	John Nix & Co., Inc	Corporation	281 Washington st	Fruits and vegetables.
768	James N. Norris	Individual	54–58 Bloomfield st	Poultry.
488	North American Fruit Exchange	Corporation	90 West st	Fruits and vegetables.
290	George Oliver Co., Inc	Corporation	28–32 Hewitt ave	Poultry.
757	Olivit Brothers, Inc	Corporation	335 Washington st	General farm produce.
896	Frederick Opolinsky	Individual	328 Washington st	Fruits and vegetables.
150	B. W. Otis & Co	Individual	6–26 Hewitt ave	Eggs, beans, peas, dressed meats and poultry.
477	William J. Overocker	Individual	601 West 33d st	Hay and straw.
292	Pagliughi Brothers	Copartnership	323 Washington st	General country produce.
409	Charles Pape & Co	Individual	164–165 West st	Fruit and produce.
46	Henry Pape & Co	Individual	138 Park place	Fruit and produce.
812	Park & Allison , Inc	Corporation	344 Washington st	Fruits and vegetables.
18	Patri-Moore & Co., Inc	Corporation	9–15 Hewitt ave	Calves, lambs, live and dressed poultry and hogs.
738	A. Paul, Jr. & Co., Inc	Corporation	50 Grace ave	Live and dressed poultry; lambs and eggs.
293	R. H. Peck & Co	Individual	26 Harrison st	Butter, eggs and cheese.
932	J. H. Peroni & Co	Individual	247 Washington st	Fruit and produce.
398	I. H. Perrine	Individual	56–60 Hewitt ave	Live and dressed poultry, eggs, fruit and vegetables.
48	John W. Pfeiffer	Individual	108 Warren st	Fruits and vegetables.
206	Phenix Cheese Co	Corporation	345–347 Greenwich st	Butter, eggs and cheese.
49	Phillips & Sons, Inc	Corporation	277 Washington st	Vegetables, fruits, poultry, calves and eggs.
584	John Pirung & Co	Corporation	324 Washington st	Fruits and vegetables.
191	Pitt, Barnum & Co	Copartnership	77–79 Hudson st	Butter, eggs and cheese.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK — *continued*	
86	H. T. Pond Co., Inc	Corporation	341–343 Washington st	Dressed poultry, eggs and butter.
1001	J. R. Poole Co	Corporation	105 Hudson st	Canned fruits, vegetables, oils and nuts.
84	R. S. Porter & Co	Copartnership	34–36 No. Moore st	Dried beans and peas.
637	The Porto Rico Fruit Exchange, Inc	Corporation	204 Franklin st	Tropical fruits.
973	Herbert A. Post	Individual	404–408 Eleventh ave	Hay, straw and grain.
448	W. D. Power & Co	Copartnership	601 West 33rd st	Hay, straw and potatoes.
340	S. T. Pratt	Individual	20 Harrison st	Butter, eggs and cheese.
649	Pressner Brothers	Copartnership	36 Harrison st	Butter and eggs.
618	George N. Reinhardt & Co	Individual	973 Brook ave	Hay.
301	John G. Rettig	Individual	286 Washington st	Fruit and produce.
70	Estate of J. Smith Richardson & Co	Copartnership	39-47 Thompson ave	Live and dressed poultry, dressed calves and pigs.
50	George M. Rittenhouse & Co	Copartnership	23–25 Jay st	Butter and eggs.
763	G. H. Rivenburg & Co	Corporation	168 Reade st	Fruits and vegetables.
579	Joseph Y. Roberts	Individual	601 West 33rd st	Hay and straw.
161	J. H. Roberts Co	Individual	270 Washington st	Fruits and vegetables.
78	Thomas J. Roberts & Co	Individual	181 Reade st	Eggs, fruits and vegetables.
831	A. Rosenblum	Individual	Pier 17, North River	Produce.
304	Benjamin W. Rowe	Individual	326 Washington st	Fruit and produce.
222	Rubenstein & London	Copartnership	192 Duane st	Butter and eggs.
512	P. Ruhlman & Co	Copartnership	261 Washington st	Fruits and vegetables.
223	D. G. Ryers' Sons	Individual	52 Harrison st	Fruits and vegetables.
625	Saal Brothers	Copartnership	323 Greenwich st	Butter, eggs and poultry.
997	Alfred A. Saisselin	Individual	199 Chambers st	Vegetables.

182	Saitta & Jones	Copartnership	202 Franklin st	Foreign fruits.
341	Sandler Brothers	Copartnership	114 Warren st	Fruit and produce.
907	Saslaw & Waxler	Copartnership	1969 First ave. and 268 Washington st.	Fruit and vegetables.
994	Sattler, Swift & Rosenbaum, Inc	Corporation	149 Reade st	Butter, eggs and cheese.
52	Joseph Sauer & Co	Individual	293 Washington st	Fruits and vegetables.
53	W. O. Saxton & Co., Inc	Corporation	174 Duane st	Butter and eggs.
514	Charles Schaefer & Son	Copartnership	Foot of East 18th st	Hay, straw and grain.
202	J. H. Schneider & Co	Corporation	286 Washington st	Fruit and produce.
363	John Schoel & Brother, Inc	Corporation	147 Reade st	Butter and eggs.
83	Henry J. Schroeder	Individual	114 West ave	Fruits, vegetables and eggs.
54	Louis J. Schwab	Individual	51–63 Grace ave	Live poultry exclusively.
944	B. F. Schwartz & Co., Inc	Corporation	Produce Exchange	All kinds grains and grain products.
613	Nathan Schweitzer Co., Inc	Corporation	289–291 Washington st	Poultry, eggs, calves and lambs.
189	H. E. Schwitters & Sons	Copartnership	867 Washington st	Fruits and vegetables.
183	Egbert Seymour	Individual	302 Greenwich st	Butter, cheese, eggs, maple sugar and syrup.
55	Sgobel & Day, Inc	Corporation	202 Franklin st	Fruits.
689	R. B. Shimer & Co	Corporation	336 Washington st	Butter and eggs.
473	J. C. Shute Co	Corporation	231 Washington st	Fruits.
986	Julius Seibert	Copartnership	201 Duane st	Fruit and produce.
422	Lewis S. Simons	Individual	287 Washington st	Fruits and vegetables.
536	Simons, Shuttleworth & French Co., Inc	Corporation	204 Franklin st	Fruits.
583	Mary Simpson	Individual	47 Little West 12th st	Vegetables.
160	Chas. M. Sladkus & Brother	Individual	194 Duane st	Butter, eggs and poultry.
204	C. V. Smith & Co	Copartnership	282 Washington st	General farm produce.
883	Ellsworth C. Smith	Individual	158th st. and Morris ave	All farm produce except hay, straw and grain.
56	Smith & Holden	Individual	309 Washington st	Fruit and produce.
57	Lewis O. Snackenberg	Individual	98 Murray st	Domestic fruits, vegetables, dressed calves, poultry, etc.
884	A. Solomon	Individual	50 Harrison st	Fruits, vegetables, butter, eggs, etc.
58	Andrew Spada & Co	Individual	202–204 Franklin st	Fruits and vegetables.
227	Steers & Menke	Corporation	20–24 Lawton ave	Poultry and meats.
82	F. D. Stefano & Co	Copartnership	196 West st	Fruits and vegetables.
554	Steinhardt & Kelly	Copartnership	101 Park place	Fruits.
631	W. H. Story & Co	Copartnership	8 Broadway	Grain.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK—*continued*	
519	H. E. Stout Co	Corporation	317 Washington st	Dressed poultry and eggs.
87	J. D. Stout & Co	Corporation	19 Jay st	Butter, cheese, eggs, etc.
164	Stout & Drost	Copartnership	146–150 Park place	Fruits and vegetables.
963	Strauss & Adler, Inc	Corporation	607–611 West 40th st., and 651 Brook ave	Calves, lambs, game and all such products
506	Joseph Sultan	Individual	168 Duane st	Butter, eggs and poultry.
784	Swift & Co., Inc	Corporation	32 Tenth ave., 105 Barclay st., 1st ave. and 45th st., 11th ave. and 35th st., 22–24 Tenth ave., West 35th st., 10th ave. and 13th st., 625–629 Brook ave., 131st st. and 12th ave., West and Bloomfield sts., and 163 Reade st	Meat, poultry, eggs, dairy products, nuts and honey.
443	Tancer Brothers	Copartnership	154 Reade st	Butter and eggs.
967	William Thomas Co	Individual	314 Washington st	Fruits and vegetables.
389	Thompson, Conklin & Co	Copartnership	100 Hudson st	Dried fruits, canned goods, beans, etc.
59	Thurston Fruit Co., Inc	Corporation	204 Franklin st	California and Northwestern fruits, Cuban, Porto Rican and Florida citrus fruits.
367	Titus Brothers	Individual	154 West st	Farm produce and fruit.
894	George M. Tobe	Individual	241–243 Washington st	Farm produce.
549	James Tozzi & Co	Individual	192 Reade st	Fruits and vegetables.
455	Trelease & Underhill	Copartnership	330 Greenwich st	Butter, eggs and poultry.
60	Antonio Troiano	Individual	295 Washington st	Fruits and vegetables.
507	Giovanni Troiano	Individual	222 Duane st	Fruits and vegetables.

801	Melchiorre Trombetta	Individual	2000 First ave	Fruit and produce.
163	Alfred Turner	Individual	158th st. and Morris ave	All farm produce.
772	Roscoe C. Tygert	Individual	601 West 33d st	Hay, straw and grain.
61	Valentine Produce Co	Corporation	262 Washington st	Fruits and vegetables.
62	Oscar A. Van Derlyn	Individual	293 Washington st	Fruits and vegetables.
378	Van Dyk & Lindsay, Inc	Corporation	245 Washington st	Hothouse fruits, alligator pears and imported vegetables.
542	A.B. Van Nostrand & Co	Copartnership	1-2-3-4 W. Washington market	All kinds of farm produce.
604	Van Orden Hay Co	Corporation	Produce Exchange	Hay and grain.
327	Abram C. Van Siclen	Individual	21-22 Harlem market	Fruit and produce.
457	George E. Van Vorst, Inc	Corporation	601 West 33d st	Hay, straw and grain.
63	H. C. Vogel & Co	Copartnership	342 Washington st	Fruit and produce.
167	J. F. Volckman & Co	Copartnership	248 Washington st	General farm produce.
495	William N. Voorhees	Individual	179 Reade st	Fruits and vegetables.
199	Edward M. Vosburgh	Individual	146 Reade st	Butter and eggs.
226	Sanford A. Vroman	Individual	33d st. and Bushwick station	Hay, straw and grain.
184	George A. Vroom & Co	Corporation	128 Eighth ave	Butter, eggs and cheese.
435	George F. Wagner Co., Inc	Corporation	189 Duane st	Butter and eggs.
636	S. & W. Waldbaum	Copartnership	140 Reade st	Butter and eggs.
64	Thomas P. Wallace, Inc	Corporation	116 Warren st	Fruits and vegetables.
369	Hezekiah Warne & Sons	Copartnership	124 Warren st	Fruits, vegetables, poultry and eggs.
452	George A. Warner	Individual	158th st. and Morris ave	General country produce.
538	Washburn & Co	Individual	650 West 34th st	Hay and straw.
75	T. A. Watson & Co	Individual	99 Park place	Fruits and vegetables.
209	Morris Weinfeld	Individual	362 Greenwich st	Butter, eggs, dressed poultry and calves.
736	Weinstein Brothers	Copartnership	320 Washington st	Fruit and general produce.
65	Charles Werner, Inc	Corporation	37 Loew ave	Live poultry.
66	Samuel Werner, Inc	Corporation	59 Loew ave	Live poultry.
71	Wessels & Co	Copartnership	246 Washington st	Fruits and vegetables.
186	G. J. Westervelt & Co	Individual	106 Murray st	Fruits and vegetables.
317	H. C. Wetterau & Co	Corporation	286 Greenwich st	Butter and eggs.
67	Walter H. Wheeler	Individual	Grace and Lawton aves	Dressed meats, eggs, etc.
406	William Whispell	Individual	23 Harlem market	Fruit and produce.
68	John F. White	Individual	854 Washington st	Fruits and vegetables.
69	A. S. Whitesell	Individual	57 Little West 12th st	Fruit and produce.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			NEW YORK—*continued*	
397	Nathan Wiesenfeld	Individual	40 Harrison st	Butter, eggs, etc.
174	Wilken Brothers, Inc	Corporation	20 Harlem market	Butter and eggs.
787	F. Williams, Inc	Corporation	601 West 33d st	Hay and straw.
773	John W. Williams, Inc	Corporation	34 Thompson ave	Meats and poultry.
634	T. Williams & Co	Copartnership	241 Washington st	Fruits, vegetables, poultry and dairy products.
988	Williams & Potter Produce Co.	Corporation	152 Beekman st	Potatoes and green corn.
381	T. S. Williamson & Brother	Copartnership	7 Lawton ave	Poultry, calves, eggs, fruit and general country produce.
990	Wilson & Co	Corporation	48–50 Tenth ave., 6 Grace ave., 34th st. and 11th ave., 609 West 34th st., 132d st. and 12th ave., 647 Brook ave., 125 Barclay st., 45th st and 1st ave	Fruits, vegetables, butter, cheese, eggs, poultry and calves.
509	M. B. Wolowitz & Co	Copartnership	1-2 Thirteenth ave	Live poultry.
824	Roscoe Conklin Wood	Individual	Lawton & Hewitt aves	Poultry.
80	Eben Barkley Woodward	Individual	302 Greenwich st	Butter, eggs and produce.
834	Woolley & Hughes	Copartnership	40–50 Hewitt ave	Poultry, calves and eggs.
79	Wright & Winsor	Copartnership	12 Harrison st	Butter, eggs and cheese.
863	Fred Yost & Co	Copartnership	190 Reade st	Fruits and vegetables.
225	A. F. Young & Co	Corporation	308 Washington st	Fruits and vegetables.
224	George J. Zeigler & Co	Copartnership	209 Franklin st	Fruits and vegetables.
205	Zenith Butter & Egg Co	Corporation	170 Duane st	Butter, eggs, cheese, etc.
43	Zimmer & Dunkak, Inc	Corporation	173–175 Duane st	Butter and eggs.
946	C H. Zinn & Co., Inc	Corporation	105 Hudson st., and 3–5 Harrison st	Butter, eggs, cheese and poultry.

NORWICH				
912	Russell Fruit Co	Corporation		Fruits , vegetables, butter and eggs.
OGDENSBURG				
492	Harrington Bros. & Smith, Inc.	Corporation	34–36 North Water st	Fruits, vegetables, butter, eggs, etc.
280	Mooney & Stewart	Copartnership	23 River st	Fruits.
ONEONTA				
784	Swift & Co., Inc	Corporation	54 Broad st	Meat, poultry, eggs, dairy products, nuts and honey.
OSWEGO				
784	Swift & Co., Inc	Corporation	300 West First st	Meat, poultry, eggs, dairy products, nuts and honey.
PORT CHESTER				
784	Swift & Co., Inc	Corporation	139 Highland st	Meat, poultry, eggs, dairy products, nuts and honey.
PORT JERVIS				
784	Swift & Co., Inc	Corporation	29–31 Jervis ave	Meat, poultry, eggs, dairy products, nuts and honey.
POUGHKEEPSIE				
859	F. M. Coughlan & Son, Inc	Corporation	429 Main st	Butter, eggs, cheese and poultry.
279	McCormick, Hubbs & Co	Corporation	359 Main st	West India and Florida fruits and produce.
ROCHESTER				
535	Brown & Otis	Copartnership	12 Ormond st	Fruits, vegetables, butter and eggs.
968	Cohen & Bloom	Copartnership	66 Public market	Fruits and vegetables.
726	C. A. Deavenport	Individual	Ormond & Franklin sts	Fruits and vegetables.
709	Dugan & Macks	Copartnership	2 Ormond st	Fruits and vegetables.
823	Kennedy Fruit & Vegetable Co., Inc	Corporation	54–56 Public market	Fruits and vegetables.
784	Swift & Co., Inc	Corporation	290 Exchange st	Meat, poultry, eggs, dairy products, nuts and honey.
979	Warren & Smallridge Co., Inc	Corporation	14 Public market	Domestic and foreign fruits and vegetables.
242	Whipple & Walzer Co	Copartnership	28 Public market	Fruits and vegetables.
990	Wilson & Co	Corporation	Frank. and Com'l sts., P. O. Box 194	Vegetables, fruits, butter, eggs, cheese, poultry and calves.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organization	Address	Kind of produce handled
			SARATOGA SPRINGS	
394	The Ballston Refrigerating Storage Co	Corporation	Van Dam st	Fruits, vegetables, eggs, butter and cheese.
784	Swift & Co., Inc	Corporation	34 Clinton st	Meat, poultry, eggs, dairy products, nuts and honey.
			SAUGERTIES	
990	Wilson & Co	Corporation	Ulster ave., P. O. Box 8	Vegetables, fruits, butter, eggs, cheese, poultry and calves.
			SCHENECTADY	
394	The Ballston Refrigerating Storage Co	Corporation	Edison ave	Fruits, vegetables, eggs, butter and cheese.
958	Caruso Rinella & Co	Copartnership	Foot of Hamilton st	All fruits and vegetables.
586	Frank E. Ludington	Individual	Foot of Hamilton st	Fruits, vegetables and other produce.
784	Swift & Co., Inc	Corporation	34 South Center st	Meat, poultry, eggs, dairy products, nuts and honey.
990	Wilson & Co	Corporation	124 South Center st	Vegetables, fruits, butter, eggs, cheese, poultry and calves.
			SCHODACK LANDING	
485	Ransen Gardinier & Sons	Copartnership		Hay, straw, potatoes and apples.
			STAPLETON	
784	Swift & Co., Inc	Corporation	Prospect st	Meat, poultry, eggs, dairy products, nuts and honey.
			SYRACUSE	
141	Oliver L. Burton & Co	Copartnership	508 Pearl st	Fruit and produce.

138	D. D. Gregory, Jr. & Brother	Copartnership	560 South Clinton st	Fruits and vegetables.
667	James Meager	Individual	215 Walton st	Fruits and vegetables.
521	Newcomb & Church Fruit Co., Inc	Corporation	348–360 West Fayette st	Fruits and vegetables.
522	Roscoe Fruit Co	Individual	417–421 North Clinton st	Fruits, vegetables, eggs, poultry and butter.
784	Swift & Co., Inc	Corporation	235 Walton st	Meat, poultry, eggs, dairy products, nuts and honey.
990	Wilson & Co	Corporation	231 Walton st	Vegetables, fruits, butter, eggs, cheese, poultry and calves.
927	Albert A. Wirkes	Individual	512–514 Pearl st	General produce.

TOMPKINSVILLE, RICHMOND COUNTY

106	John Angleman	Individual	Minthorne & Bay sts	General produce.

TROY

805	Armour & Co	Corporation	2612–2616 Sixth ave	Dressed cattle, sheep, hogs and veal, butter, eggs, cheese and poultry.
101	Battaglia Brothers	Copartnership	31 Hill st	Fruits and vegetables.
585	Birney & Nicholson	Copartnership	218–220 Fourth st., and 21–23 Hill st.	Fruits and vegetables.
391	Nugent & Powell	Copartnership	216 Fourth st	Fruit and produce.
784	Swift & Co., Inc	Corporation	2788–2790 Sixth ave	Meat, poultry, eggs, dairy products, nuts and honey.
990	Wilson & Co	Corporation	2626 Sixth ave	Vegetables, fruits, butter, eggs, cheese, poultry and calves.

UTICA

122	Anthony & Jones Co	Corporation	29 Whitesboro st	Fruits and vegetables.
916	A. Cardamone & Sons	Copartnership	726 Broad st	Fruits, vegetables and eggs.
392	Griffith M. Jones & Co	Corporation	21–23 Whitesboro st	Fruit, produce, cheese and maple syrup.
511	Charles E. Linkie	Individual	140–144 Hotel st	Fruits and vegetables.
277	Owen & Griffiths Co	Corporation	25–27 Whitesboro st	Fruits and vegetables of all kinds.
520	Lester J. Start	Individual	36–40 Whitesboro st	Butter, eggs, fruits and vegetables.
784	Swift & Co., Inc	Corporation	413–415 Main st	Meat, poultry, eggs, dairy products, nuts and honey.
990	Wilson & Co	Corporation	Hotel and Water sts	Vegetables, fruits, butter, eggs, cheese, poultry and calves.

LICENSED COMMISSION MERCHANTS — (*Continued*)

File No.	Name	Organisation	Address	Kind of produce handled
			WATERTOWN	
800	Calen & Co	Copartnership	221 Court st	Fruits and vegetables.
492	Harrington Brothers & Smith, Inc	Corporation	Printing House place	Fruits, vegetables, butter, eggs, etc.
280	Mooney & Stewart	Copartnership	U. & B. Yards	Fruits.
176	C. J. Myers & Co	Individual	260 E. Main st	Fruits and vegetables.
889	Sparacino & Co	Copartnership	415–417 West Main st	Fruits and vegetables.
			WAVERLY	
148	Empire Produce Co	Corporation	362 Broad st	Butter, eggs and all kinds of farm produce.
			YONKERS	
784	Swift & Co., Inc	Corporation	23 Locust st	Meat, poultry, eggs, dairy products, nuts and honey.

STATE OF NEW YORK

DEPARTMENT OF FARMS AND MARKETS

CHARLES S. WILSON, Commissioner

Bulletin 102

(Reprint from Bulletin 77)

Potato Growing
IN
New York State

ISSUED BY THE BUREAU OF FARMERS' INSTITUTES AND
COMPILED UNDER THE SUPERVISION
OF THE DIRECTOR

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INTRODUCTION

With the exception of alfalfa there is no farm crop concerning which the Department of Agriculture receives so many inquiries as potatoes. This is to be expected when we consider that it is fourth in acreage of farm crops in the state, there being 394,319 acres devoted to it, producing annually 48,597,701 bushels — an average of 123.2 bushels per acre, worth $20,399,000, as may be seen by an examination of the figures taken from the United States census for the year 1909 in the rear of the bulletin. These statistics show, too, how widely it is distributed over the counties, twenty-five counties having 4,000 or more acres devoted to this crop. In many counties and on many farms the prosperity of the inhabitants depends on its success. Even where it is not of prime importance as a source of revenue through all the countryside, it is one of the staple articles of diet on the tables of rich and poor alike. By its aid many farms have been paid for. It has helped to educate many a man and woman prominent in world-wide affairs, as well as to support the Gospel by which the world is made better. This is the pleasing side of the picture; the other less pleasing is the many difficulties connected with its profitable production.

The fact that the potato is propagated not from a true seed but an enlarged underground stem, renders it vitally necessary that the seed stock should be most carefully selected and preserved. The susceptibility to diseases of both tubers and plants, with the many insect enemies which attack it, and which must be successfully combated to insure a profitable crop, are all serious handicaps and call for most intelligent and painstaking effort. Add to this the fact that the composition of the tuber being nearly three-fourths water, together with the additional amount required to develop and sustain the top, call into action the grower's best endeavor to properly husband his water supply. He must also consider the necessity of supplying an abundance of plant food of the proper sort available when most needed, all of which increases the expense and adds to the risk. Any one of the above may and often do produce a whole or partial failure. In these days of high prices and scanty labor supply, much expensive machinery must be employed if the profit from the crop is to be on the right side of the ledger, which means sufficiently large acreage to afford the purchase of such machinery. It is a heavy crop to handle and can not be carried for an indefinite time as can hay or the cereals. Hence, good roads, proximity to shipping points and proper market facilities, enter into the problem to as great or greater degree than with any other farm crop, except milk.

This volume has been compiled to give to the potato its proper place in the agriculture of our state, and more particularly to set forth the best cultural methods, with the nature and life history of the diseases and insects which beset the crop, as well as the means for their control; also examples of successful marketing, not forgetting the consuming public as evidenced by the last article.

The subject matter has been supplied by selected writers who speak — or write — with authority, because of their experience along the particular lines which they treat. This help has been cheerfully given at no small sacrifice of time on the part of the writers. The compiler desires to express his appreciation of their efforts which he is sure will be seconded by the many who will obtain help from its pages. With this end in view the work is sent forth on its mission.

HISTORY OF THE POTATO

EDWARD VAN ALSTYNE, KINDERHOOK, N. Y.

Director of Farmers' Institutes

The potato, with corn and tobacco, completes the trinity of purely American plants occupying a prominent place among our agricultural products. It is a native of South America and was found there by Spanish explorers early in the sixteenth century. They reported it an important article of food in what is now Chili and Peru. Its native home is at an altitude of from 4,000 to 6,000 feet, the climatic conditions being not dissimilar to those in Colorado and southern Idaho where it flourishes today. These explorers carried it to Spain. Other Spaniards took it to Florida, and very likely from there to Virginia. London's encyclopedia published in 1836 says it was "probably brought to England from Virginia by Sir Walter Raleigh in 1586," induced, no doubt, by the prizes history tells us the crown offered for new and valuable plants and fruits. All authorities agree as to its being found in Virginia by the colonists. That it had not been growing for a long time is indicated by the fact that the tubers are spoken of as no larger than marbles. Some give the credit of bringing it to England to Admiral Sir Francis Drake, who is said to have sent especially to Virginia for the tubers. All agree as to the year of its introduction into Great Britain; that it came from Virginia, and that it was first planted in Ireland near Cork. In Ireland it was well received. Doubtless to this is due the fact that it is so commonly and erroneously called the Irish potato. In England it at first met with little favor. Sir Walter is said to have endeavored to induce Queen Bess to take an interest in his find and to that end had a dish of the cooked tubers placed on her table. Neither she nor her guests cared for the new vegetable and were inclined to believe it poisonous.

In 1663 potato culture became quite general through the efforts of the Royal Society, which recognized its food value. Scotland does not seem to have taken to it until the middle of the eighteenth century, when a famine impressed its value on the Scottish people.

In 1747 we read that 700 bushels were imported from Carolina. Italy appears to have given attention to the newcomer before any other European country. After Ireland, Switzerland, France and Germany took it up, but it does not seem to have been given its true value as a human food until the nineteenth century.

To a Frenchman, M. Parmentier, is due the popularity of the potato as a food. His efforts were ably seconded by Louis XVI, who ordered a large tract planted with potatoes. Later he wore one of the blossoms in his buttonhole. The King had the plot guarded by a cordon of troops which excited the curiosity of the people. When the tubers were gathered he invited a number of scientific and prominent men to a banquet where every dish was composed in whole or part of potatoes. This quickly brought it into popular favor.

Early settlers in this country generally appear to have given it a prominent place in their agriculture. In 1840 mention is first made of the potato in the United State census report. The crop is given at 108,298,060 bushels. In all North America, Australasia and South America, it is now generally grown. During the last thirty years its culture has become general in Holland, Germany and France, and it is said to be rapidly increasing in favor in Russia. China too is cultivating it, but in that country, as with all else new, its adoption is slow. Owing to its food qualities it will doubtless be of great economic value in the land of the Dragon. No tuber heretofore discovered is of such world-wide adaptation as a human food. The last article, by Mrs. Harrington, clearly demonstrates this fact.

BOTANY AND NOMENCLATURE

The potato belongs to the *nightshade* family, which explains the English prejudice against it. In this family are the tobacco, tomato, egg-plant and capsicum. There are sixteen hundred species, only six of which bear tubers. The wild potato produces seed balls from the flowers. Owing to its long propagation from the tuber or from the cutting, these are seldom seen where it is cultivated. The writer as a boy remembers the seed ball as much more common than at present.

The botanical name of the potato is *Solanum tuberosum,* the first word meaning soothing or quieting (the effect of the nightshade). This is the name of the genus. In the second word the Latin root "tuber" is easily recognized. Freely translated the name means "soothing plant with swellings." This scientific name was given by a celebrated botanist, Jaspard Banhim of Basle, Switzerland, about 1590. It was called *openauk,* an Indian name; also "Bata Virginia." A Frenchman, M. Frazier, a voyager on the coast of Chili, in a book describing that voyage, gave it its popular name, it having been first called "apple of the earth"—French, *Pomme de Terre.* Potato seems to have been a corruption or adaption of the Indian name papas, meaning roots, and bata as given above.

HISTORIC IMPORTANCE

To the failure of the crop, caused by what is now generally recognized as late blight, was due the famine in Ireland in 1846, through which Ireland lost by death and immigration more than three million of her people. The potato had come to be the sole food dependence of the peasant population. In 1844 the crop was stricken in America, but in Ireland the yield was plentiful. In 1845 the harvest promised to be the most abundant in years. In one short month it was as if a simoon had blasted the land. The buoyant nature of the Celt asserted itself and the year following he planted as before. All promised well until the close of July, when in a night, the entire crop was doomed. The previous year had exhausted the people. By winter the deaths were so many that no attempt was made to provide coffin or shroud. The fever and plague accompanied starvation. The failure of England to open her ports intensified the situation. To the coming of English landlords to take the place of the natives is largely due the troubles of Ireland to this day. For a time it appeared as if the potato was threatened with extinction. Climatic conditions, however, were not favorable to the spread of the disease, and for a generation the crop continued to be profitably grown with only an occasional disastrous failure due to the dread disease, for until twenty-five years ago nothing was done to control it. It seems incredible in the light of experience of the past dozen years that the unchecked spread of the disease should not have completely wiped out the crop. Doubtless the vigor of the plant grown on newer and more fertile soils with the foliage uninjured by the Colorado beetle in part explains the situation.

In January, 1889, the writer attended one of the first farmers' institutes held in the state in Agricultural Hall (now the Department of Agriculture building) in the city of Albany. Dr. Charles H. Peck, State Botanist, read a paper describing the nature of the blight, illustrated by charts showing the affected foliage. He told of the accidental discovery in a vineyard near Bordeaux, France, of a combination of lime and copper sulphate as a preventive of the rot in the grape and of its having been successfully used in combating potato blight. This is the now well-known bordeaux mixture. I think this was the first public presentation of the subject in the state. Representative men in all lines of agriculture and horticulture were present, and I question if any present had previous knowledge of the matter. So prominent a man as Dr. Hexamer, editor of the American Agriculturist, asked if the poison could not be put with the mixture and both bugs and blight spraying be done at the same time. Dr. Peck did not know. A couple of years later this question was asked at a farmers' institute in Batavia. A very prominent horticulturist said, "Paris green will kill the bugs, bordeaux mixture prevent the blight, both together will kill the vines." Truly "the world do move."

In 1875, the Colorado potato beetle began to be troublesome in western New York. A few specimens were seen in the eastern portion of the state, and the year following they were very abundant. Hundreds of acres of potatoes were destroyed by them. Paris green was suggested as a remedy, but the proper quantity to use was uncertain as well as the best way to apply it. Many seriously burned their vines. All sorts of nostrums were put on the market, all of which were equally valueless. Subsequently paris green came into general use and timely application controlled the beetle. Nevertheless, the free arsenic in it has done great injury to the foliage. Doubtless much that has been considered blight is nothing but paris green injury. The advent of the potato bug and the spread of the blight has radically changed the agriculture of many portions of the state.

Scientists, experiment station men, as well as growers, are now giving much intelligent attention to this plant as attested by the different articles in this bulletin, for its almost world-wide value is everywhere recognized.

NOTE.— Credit is given to *Bailey's Encyclopedia of Horticulture* and "*The Potato*" by Eugene S. Grubb and W. S. Guilford, for much of the data in this article.

POTATO SOILS AND THEIR PREPARATION

PROFESSOR ALVA AGEE

Director of Agricultural Extension, New Brunswick, N. J.

Certain areas have become noted for potato production. Their soils favor the plant. A big percentage of the country's crop is produced in soils less well adapted to it. Local markets may make the crop a profitable one despite some adverse conditions, and then it is good farming to have it in the rotation. In such cases the grower selects the soil that is nearest the desired type and makes the best of it.

A desirable potato soil is well drained, mellow and retentive of moisture. The plant needs a supply of moisture to maintain continuous growth and the tubers need such a soil structure that displacement of the particles during their development is easy. We may supply an abundance of plant food, but these two simple requirements are imperative. Success in potato growing depends in large measure on skill in selection of a soil, or else in its amendment by use of organic matter and tillage.

The growers in warm latitudes depend very much on earliness for profit and select sandy soils that would be too hot and too droughty for potatoes, using the entire summer for their growth. These light lands are made reasonably retentive of moisture by the incorporation of decayed organic matter with the soil. The period of growth is confined to the season of the year having a relatively large rainfall. Any shortage in yield due to lack of moisture and excessive heat has its compensation in the high price commanded by an early crop. It thus comes about that a good potato soil in the south may be one that would be too light for main crop potatoes in the North. Crimson clover, wheat and rye are favorite catch crops preceding potatoes and furnishing humus.

A very large acreage of potatoes in the North is grown in soils that owe their fitness to the presence of organic matter which keeps them in a friable condition. In some instances nature has furnished the vegetable matter in a lavish way, as in portions of the north-central states, but oftener there is constant struggle on the part of the farmer to make the supply adequate or to keep it so. This is true of the alluvial soils that are especially adapted to potatoes as well as to the sandy loam up-lands that lose their humus readily. Mellowness is a characteristic greatly to be desired and not to be retained without effort.

It is feasible to convert a rather compact clay loam or silt loam into a profitable potato soil by having decaying organic matter well distributed among the soil particles. Sods lend themselves well to this purpose because the roots penetrate every part of the ground. Such soils are less leachy than quite sandy loams, and the remains of sods and cover crops make their moisture-holding capacity still greater. When selecting land for a main crop, there is an advantage in that type which is naturally so heavy that organic material must be kept in liberal supply. Sods and potatoes go naturally into a crop rotation. Matured vegetation is more serviceable than sappy growths, and must form a good percentage of the total supply in the soil.

There are crops that assist in putting heavy land into a more friable state. It is a common practice to use clover for this purpose. Where potatoes should be grown in a heavy soil, a local market or home use making this desirable, improved physical condition may be obtained by growing corn on the clover sod and leaving the stalks on the ground to be plowed under in late fall. If a stalk-cutter is not available, a heavily weighted disk harrow will help to put the stalks into condition for quick decay.

In the selection of a soil for potatoes, the natural fertility is a smaller consideration than physical condition. The plant food may be supplied. The crop is a costly one to transfer and the soils rich in organic material in our north-central states can not keep any sandy loam out of competition if it is near a good market. Vegetable matter can make it mellow and retentive of moisture and a complete fertilizer will furnish the needed plant food.

The area of soil that can be adapted to the potato is larger than many suppose, but it is inadvisable to attempt to make over heavy clays and shales. This is like rowing against the tide. If such soils must be used for a home supply, provide organic matter liberally, strew coal-ashes in the row, plant shallow and ridge, thus obtaining a degree of looseness in texture where the tubers should develop.

The right time for plowing for potatoes is a local question. The purpose of the plowing is to loosen the ground and to mix with the soil any organic matter that may be on the surface. If full exposure to the winter's freezes will benefit physical condition for an early planted crop, it often is good practice to plow in the fall. When planting is later in the spring, the plowing may better be done in early spring.

A heavily weighted disk or cutaway harrow should be used to cut a sod before it is broken. This applies with special force to a grass sod which naturally decays slowly, and is not usually accounted a good one with which to precede potatoes. Double-cut in the fall and again in the spring and then plow as deeply as the soil permits. Leave the sod on edge so far as possible. Follow the plow with a disk or spring-tooth harrow, and it will be found that the diskings before the plow have reduced the labor of preparation after the plow more than one half. When the sod is broken up so that decay will be rapid and so that the plowed soil forms a ready union with the subsoil for the rise of moisture, there is no profit from further harrowings, provided good pulverization has been effected. The surface should be made smooth by use of a plank float before the planter is started.

SEED SELECTION AND BREEDING

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ENVIRONMENT AND HEREDITY

With the development of a potato, just as in the case of a man, there are two important factors concerned,— environment and heredity.

By the first of these we mean whatever has to do with the home or surroundings. In the case of a man the environment consists of his home life, with all that goes to make up a home, education, friends, food, climate and the like. In the case of the potato the environment consist of the soil, rainfall, sunshine, weeds, cultivation and the like.

Fig. 1. — Harvesting Potato-Breeding Plots, Plant-Breeding Garden, Cornell University Agricultural Experiment Station.

By the second of these two factors, heredity, we mean "that property of an organism by which its peculiar nature is transmitted to its descendants." A modern scientist has said that environment is "what we have" while heredity is "what we are."

These two factors have long been recognized and many discussions have arisen as to their relative influence, some insisting that environment is the more important, while others are equally sure that heredity is the stronger factor. For the most part this discussion has centered around human beings or animals rather than around plants, although we now know that the same principles of evolution and heredity apply to both plants and animals. Many instances have been cited by both sides in proof of their assertions. This question never has and probably never will be settled, because the two factors can not be separated so that they work absolutely alone.

For our purpose it is sufficient to know that they are both important in the development of any organism — or to go further in the production of any crop. In the case of plants the importance of the environment has long been known and the careful farmer has seen to it that the land has been properly fertilized and cultivated. He has made conditions for his crops as favorable as possible. However, it is not the purpose of this article to discuss the question of environment, important as it is, but to lay especial emphasis on the second force, heredity. For, in order to produce a maximum crop yield, we must make use of every factor for improvement. While the fundamental principles herein mentioned can be applied to all crops we shall make the application to potatoes only.

HOW TO MAKE THE FORCE OF HEREDITY WORK FOR US

Hybridization

In plant-breeding work there are two processes generally employed, namely hybridization and selection. Hybridization is the process of crossing one plant with another of a different variety or strain. This process is usually more or less complicated and sometimes requires considerable skill, and with the potato it is more or less doubtful for the flowers of this plant are not, as a rule, easily fertilized. Probably every potato grower has seen a seed ball although they occur but rarely, in spite of the fact that many varieties of potatoes bloom luxuriantly. Some of our standard varieties have arisen as seedlings in this manner. However, the amount of time and labor necessary to do this places this process beyond the reach of the practical man who is looking for quick results. The production of new and improved varieties by hybridization, for the most part, will have to be left to the seedsmen and to the experiment station men.

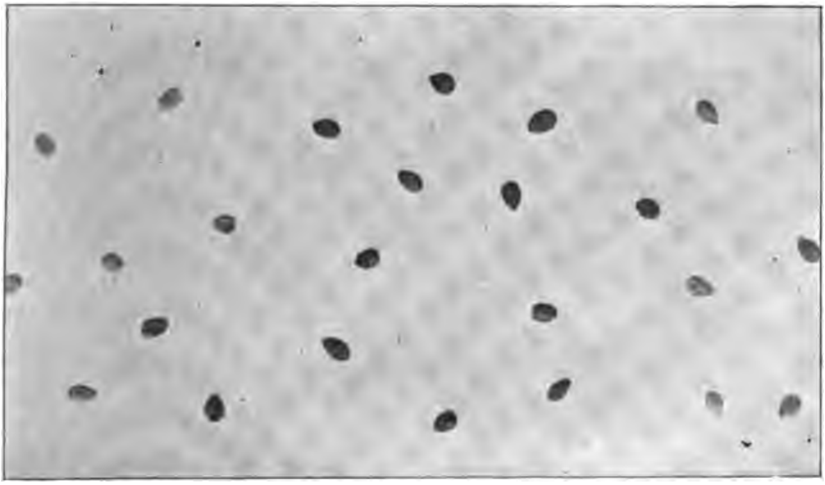

FIG. 2. — POTATO SEED. TWICE MAGNIFIED.

Selection

On the other hand, the process of selection may be utilized by any practical potato grower. Indeed, he can ill afford not to use it since the process is comparatively simple and requires but a small amount of time and labor in comparison with the returns it will give. It might be well to state here that by selection is meant a process of isolation of either desirable or undesirable strains.

Variation

The success of selection depends on the variation that is general in nature. No two individuals, either plants or animals, are exactly alike. They may have the same chance in life, the same environment, and yet their development is different because

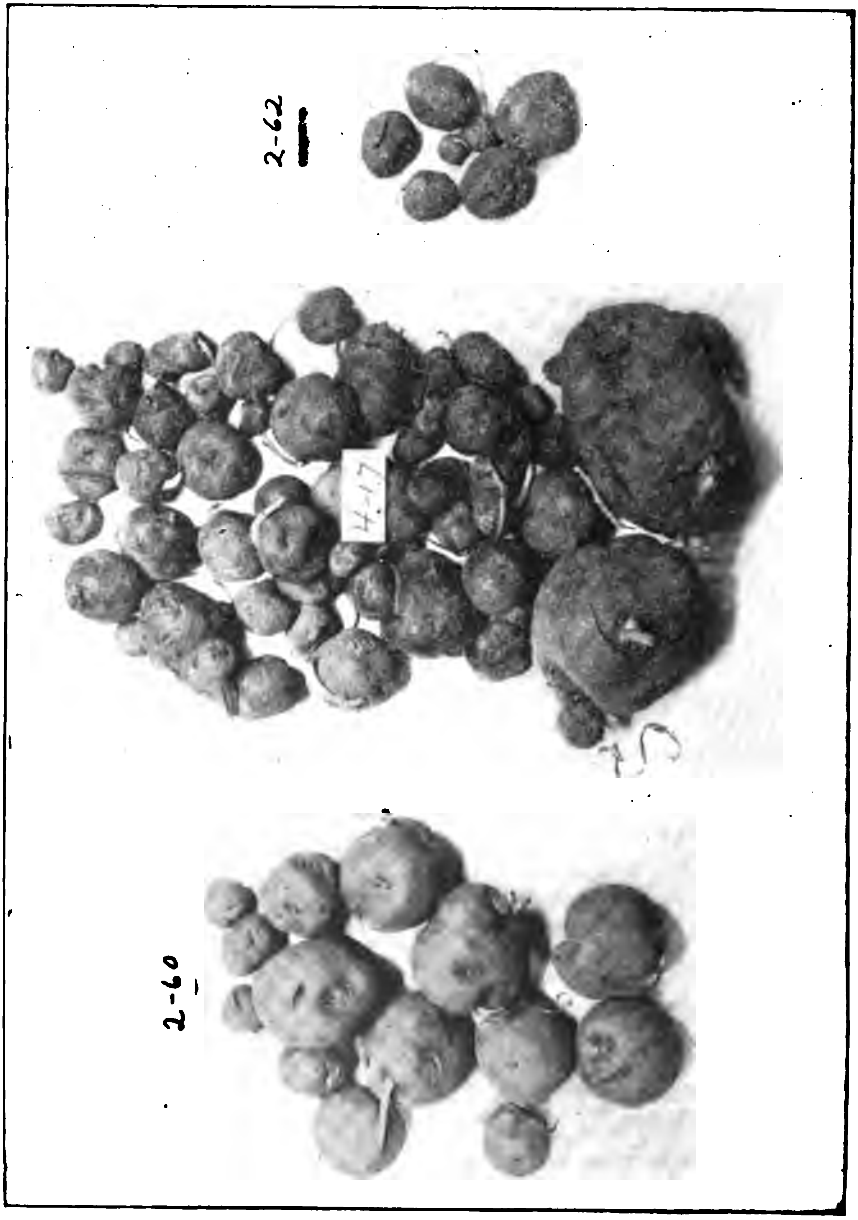

FIG. 3. — POTATOES GROWN FROM SEED. FIRST YEAR'S CROP. ONE-HALF NATURAL SIZE.

of the inherent differences which have been handed down to them from their ancestors by the factor of heredity. The amount and nature of this variation can not be discussed in detail. We will apply the principle directly to the potato.

We may choose from a bin of potatoes of one variety 200 tubers. These tubers may appear very much alike in regard to their uniformity, size, color, depth of eyes, and the like. Indeed, from external appearances we would judge that one of these tubers was just as good as another. And this may be true so far as the desirability for present use as food is concerned. But let us test the transmission of these 200 individuals. This can best be done by use of the "tuber unit" method devised by Webber.[1]

Tuber Unit Method

In this method each tuber is cut lengthwise into four sections, cutting from the seed end in order that some of the seed-end eyes may be in each seed piece. Then the four pieces of each potato are planted in four consecutive hills. These four hills constitute the unit. The lot of 200 tubers is planted in this manner. At harvest time each unit is dug separately. At that time the inherent difference which was in the original parent tubers will become apparent. Some units will yield a great deal more than others, although they are located side by side on the same soil. In Table 1 is given the yield of a series of tuber units selected at random from a breeding plot such as described above. An inspection of Table 1 shows us that there was a great difference in the yielding capacity of the individual tubers. The lowest unit yielded at the rate of 25 bushels per acre while the highest one yielded at the rate of 320 bushels per acre. Mr. Potato-Grower, from which unit would you prefer to save seed for next year's planting? Does the successful dairyman breed from the high producing or the low producing cows?

Test of Transmission

The question may arise as to the transmission of this yielding capacity. Will tubers selected from the good yielding units on the average reproduce that characteristic in the next generation and, similarly, will tubers from the low yielding units reproduce that characteristic? In Table 2 are data which throw light on this question. This table shows the results obtained in the Cornell experiments[1] by selecting from both low and high yielding strains for a period of five years. In 1909 the differences are not so apparent from the table, because, for the most part, the low yielding units produced a small yield of merchantable tubers, but in two instances there were enough small unmarketable tubers in these units to make them actually weigh more than the units which were selected as high yield. Beginning with the crop of 1910, there is a very striking difference between the

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[1] Webber, H. J., *Plant-Breeding for Farmers.* Bulletin 251, Cornell University Agricultural Experiment Station, February, 1908.

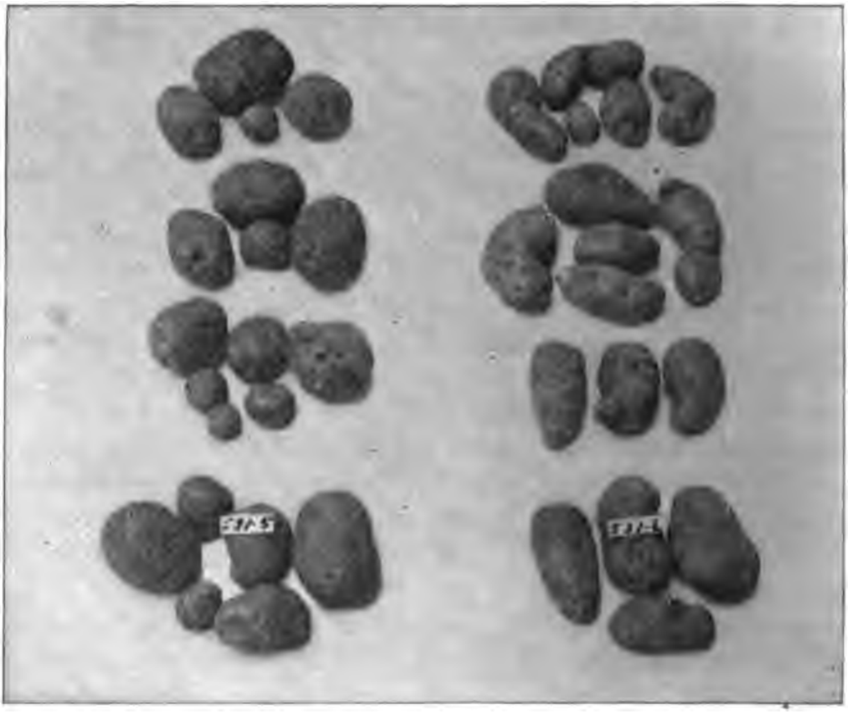

FIG. 4. — VARIATION IN THE PROGENY OF TWO INDIVIDUAL TUBERS SELECTED FROM VERMONT GOLD COIN. SERIES 531-2, LONG, SLENDER TUBERS; SERIES 531-5, ROUND, OBLONG TUBERS.

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[1] The potato-breeding experiments at Cornell were started by Dr. H. J. Webber who conducted the work until he severed his connection with the College in 1913. At that time the work was transferred to the writer.

strains which have been transmitted for four bud generations. The yields in this table are based on the average yield per hill. For a better comparison the five year average is also given in bushels per acre. The five year average of the low yielding strain is 82 bushels per acre, while that of the high yielding strain is 208 bushels per acre. In Fig. 5 this comparison is shown graphically by means of wire cylinders. The height of the column in each cylinder represents the comparative yield of that strain.

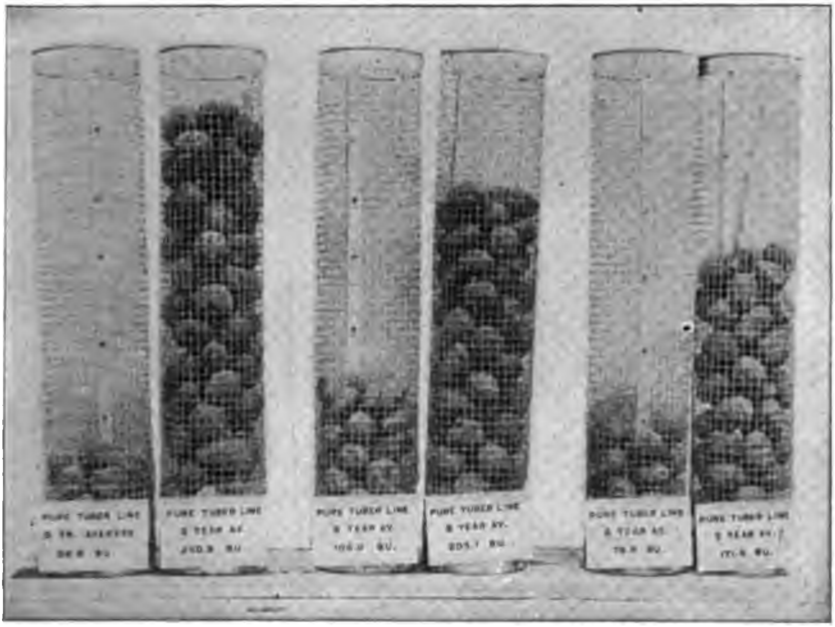

FIG. 5. — EFFECT OF INDIVIDUAL HILL SELECTION. EACH CYLINDER REPRESENTS THE OFFSPRING OF AN INDIVIDUAL PARENTAL TUBER. THE DIFFERENT HEIGHTS REPRESENT THE COMPARATIVE YIELD IN BUSHELS PER ACRE FOR FIVE YEARS.

The data which have been given in Tables 1 and 2 have to do only with yield. Variation occurs in regard to many other characteristics, such as size, shape, color, depth (Fig. 7) and shape of eyes, and the like. Thus, from a commercial variety such as Rural New Yorker, both a long and a round tuber strain may be obtained by individual selection.

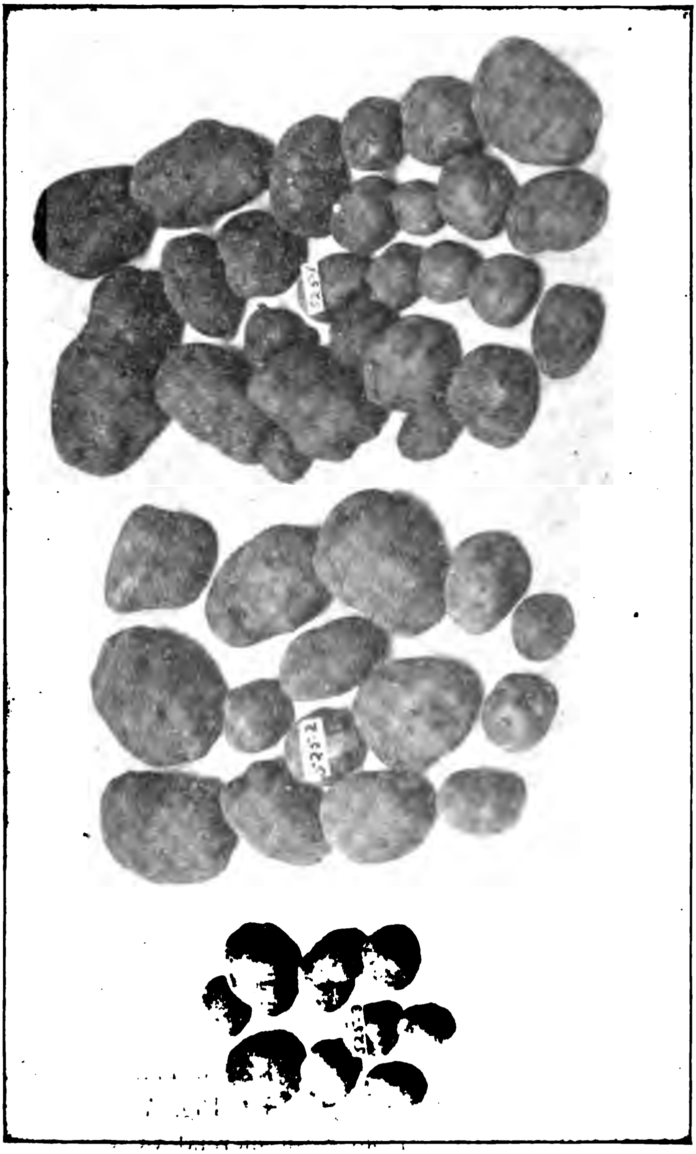

FIG. 6. —VARIATION IN THE PROGENY OF THREE INDIVIDUAL TUBERS OF VERMONT GOLD COIN. SERIES 525-1, IRREGULAR, GOOD YIELD; SERIES 525-2, REGULAR, GOOD YIELD; SERIES 525-3, LOW YIELD.

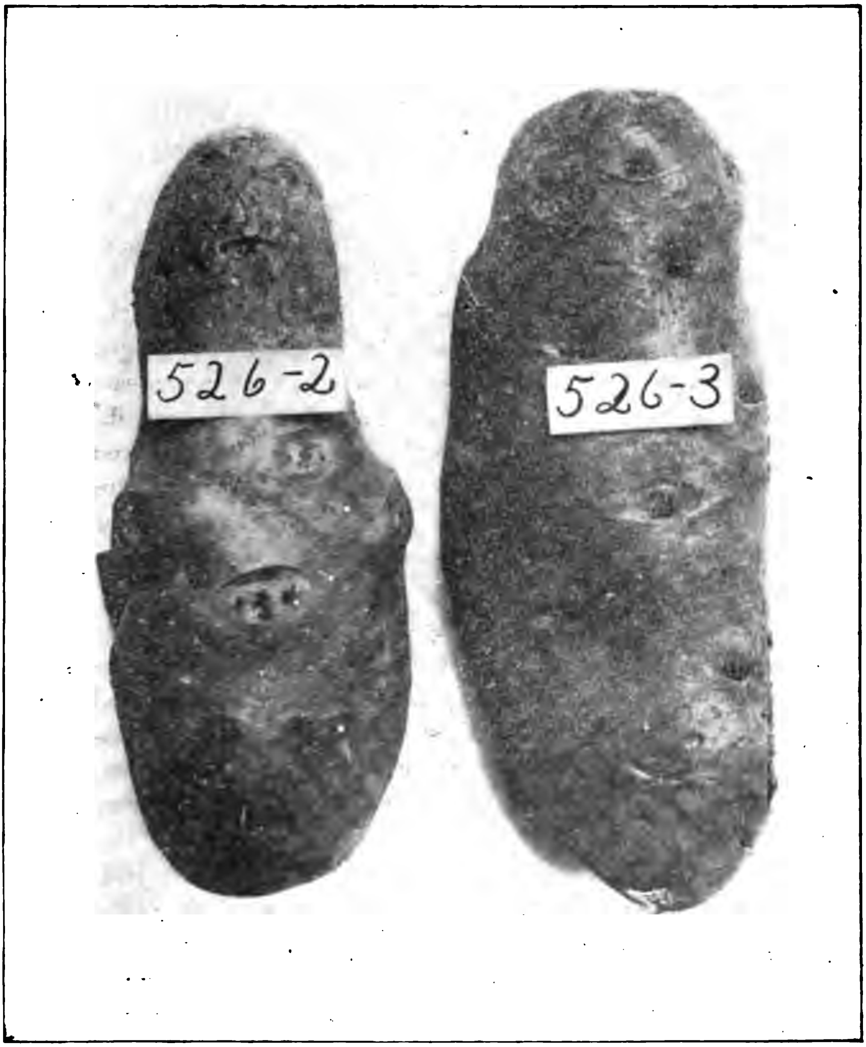

FIG. 7. — VARIATION IN THE DEPTH OF EYES OF TWO TUBERS SELECTED FROM EARLY ROSE. SERIES 526-2, SHALLOW EYES; SERIES 526-3, DEEP EYES.

The results of a large number of experiments at various agricultural colleges and experiment stations have practically the same significance as the ones herein given, namely that the yield of potatoes may be materially increased by the practice of some systematic method of individual hill selection. This conclusion is further strengthened by the results obtained from practical growers in many parts of the country.

Running Out of Seed

We hear a great deal said about the "running out" of seed and some growers yet advocate a change of seed every year or so. There are certain restricted localities in New York State — Long Island for example — where this may be necessary, although it has not yet been demonstrated conclusively. Too, the Cornell experiments have shown that a certain amount of bud variation occurs in potatoes and that diverse strains may arise within the offspring of a single parental tuber. Often, these variations that occur are in the nature of a degenerate or low yielding type. However, these offshoots are comparatively infrequent and the practical man will immediately observe and discard them, if he is practicing hill selection.

It is not expected that the big grower will dig his entire crop by hand, but he should carry on a seed selection plot at one side of his field which he can dig by hand and where he can make his individual hill selections. These individual hill selections will constitute a seed stock which can be increased in a good section of the field. In this manner the entire commercial field may soon be planted to selected seed.

The method of individual hill selection is applicable and practical for the greater part of the State of New York, one of the leading potato producing states in the Union. If we maintain our position in the production of this important crop, we must take advantage of all our opportunities. Let us not neglect this important question of the selection of our seed stock. Along with the important factor of environment let us make use of the factor of heredity.

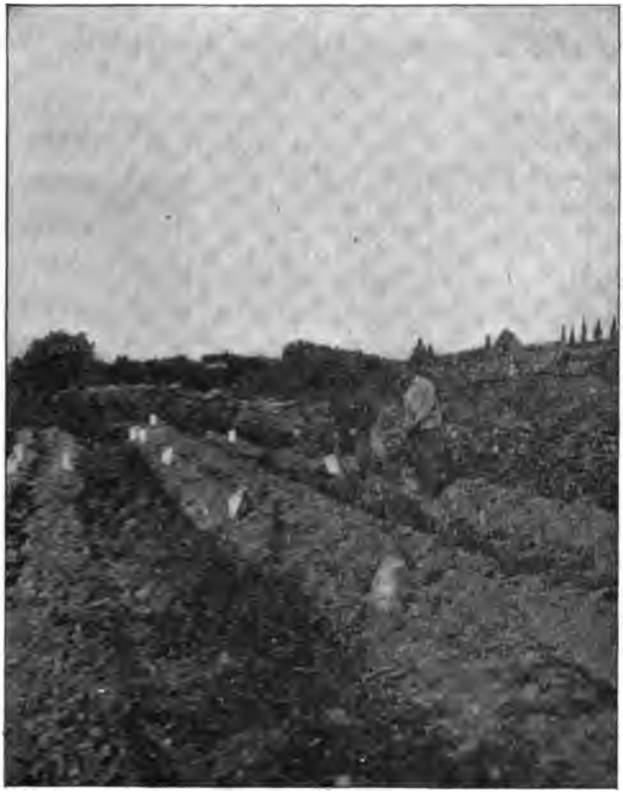

FIG. 8. — DIGGING A SEED PLOT OF POTATOES IN DUTCHESS COUNTY.

Table 1

Showing variation in the yielding capacity of different tubers. Each unit is the product of a different parental tuber.

Unit	Yield bu. per acre	Unit	Yield bu. per acre
1	110	9	230
2	220	10	130
3	220	11	210
4	230	12	70
5	280	13	190
6	320	14	190
7	240	15	25
8	230	16	270

Table 2.

Results of selection from high and low yielding strains of potatoes.

	1909 yield per hill, gr.	1910 yield per hill, gr.	1911 yield per hill, gr.	1912 yield per hill, gr.	1913 yield per hill, gr.	Five year average yield per hill, gr.	Five year average bushel per acre.
Low yield	693	43	32	76	101	189.16	67
High yield	307	619	390	1,840	395	710.28	251
Low yield	1,044	130	37	107	97	283.16	100
High yield	977	550	480	544	322	574.78	203
Low yield	659	202	64	62	141	225.64	80
High yield	706	410	281	673	357	485.52	171

Five-year average of three low-yielding strains 82 bushels per acre.
Five-year average of three high-yielding strains 208 bushels per acre.

SOME CAUSES OF POOR STANDS OF POTATOES

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One of the principal reasons for the average low yield of potatoes in the state of New York is the failure to obtain a good stand at the start. In addition, many of us do not realize how much more expensive it is to grow half a crop as compared with a full one. For example, if it costs seventy-five dollars per acre to grow a full crop of a hundred and fifty bushels — or fifty cents a bushel — it costs more than one dollar per bushel to grow a crop of seventy-five bushels per acre. Hence, it should be the aim of every grower each year to approach as near as possible a perfect stand of potatoes to begin with. In order to do this it is necessary to familiarize ourselves with the factors which enter in and affect a stand of potatoes.

One of the primary causes of a poor stand are the diseases to which the potato is subject. There are a number of these and they will be discussed in the order of their importance.

LATE BLIGHT

Although this is primarily a disease of the vine and shows its injury principally by destroying the foliage, it is just as destructive to the tubers and far more reaching in its after effects. Wherever potato vines are attacked by the late blight, even though only slightly affected, as in cases where they are sprayed, the seeds or spores of the blight fall to the ground and are carried by water to the tubers on which they sprout and grow much the same as they do on the leaves, even producing blackened areas under the skin of the tuber. Under favorable conditions tubers so blighted, rot in the ground as do the leaves above ground. In most cases, however, the disease is checked in its growth on the tuber by cool weather and the potatoes do not rot until stored. In

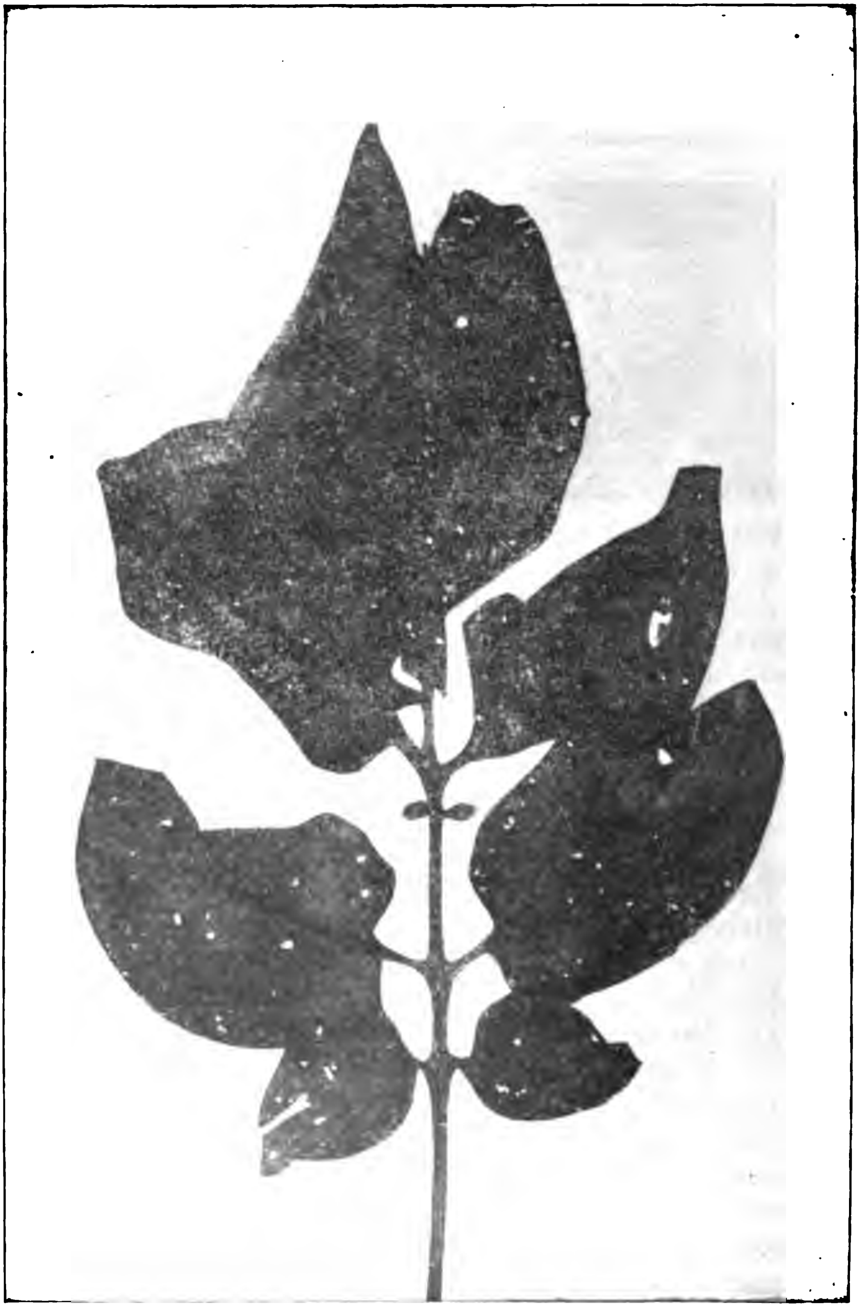

FIG. 9. — POTATO LEAF AFFECTED WITH LATE BLIGHT.

still other instances the seeds or spores of the late blight become scattered on the tubers in the act of digging. These tubers along with those that were affected in the ground are stored in pits and cellars where the temperature is high enough for the parasitic plant of the blight to grow slowly and we have as a result the so-called "dry-rot" of the storehouse.

In sections of the county where it is customary to wait until June to plant, if tubers affected as above are planted in a soil which has warmed to about sixty degrees, the disease commences to grow and destroys or rots the seed piece before the sprout can become rooted. In these sections the question is frequently asked, "Why did the first seed I planted come good and what I planted a day or two later, rot?" Inquiry usually brings out the fact that all the rows were first opened, then the fertilizer applied, if used, after which the seed pieces were dropped and covered. In cases where the field was too large to plant in one day, or other conditions interfered, the furrows being opened, the seed rotted before it sprouted. Opening the furrows and leaving them exposed to the sunlight and air a few hours will frequently raise the temperature to or above the point at which the dormant blight in the seed will commence growth. Hence, planting affected seed in a trench or furrow that has lain open several hours and covering the seed with this soil, favors a quick growth of the blight spores within or on the seed piece, resulting in their rotting before they sprout.

The same conditions follow where potatoes affected by the blight are shipped south and planted late. In cases where they are shipped south in the fall for storage they usually go faster with dry rot than when stored in northern sections, due to the fact that the temperature can not be kept low enough to prevent the growth of blight in storage.

In cases where tubers from blighted fields are planted in a soil, either north or south, with a temperature of forty degrees, and kept near that temperature until sprouted, the sprouts "get their own roots" before the soil becomes warm enough for the growth of the blight spores, after which the rotting of the seed piece may result in no harm.

Means of Preventing

If possible do not plant affected seed. Keep plants well sprayed with bordeaux mixture during the growing period. If it is impossible to entirely prevent the blighting of the foliage by spraying, practice either deep planting or ridging at last cultivation. In addition use a good ridger as soon as the vines begin to die. By these methods enough soil is placed over the tuber to act as a filter which prevents the spores reaching them.

Never dig potatoes where affected with blight until the vines are all dead and dry or have been frozen. When dug, store in a cool, dry place, keeping the temperature as low as possible. If blighted seed must be used, plant early in a cool, moist soil.

Treating the tubers with formaldehyde or corrosive sublimate is of little or no value for preventing dry rot or late blight in seed. So far as known the disease lives over winter only on and in the affected tubers.

FUSARIUM BLIGHT AND DRY ROT

This is another disease that sometimes reduces the stand of potatoes, and its effect is usually first noticed by an early maturing of vines here and there over the field. In some instances it causes a "rosetting" or curling of the tops when the vines are about six inches high, combined with dying of the lower leaves and a resultant trimmed appearance. In other cases, where the attack is of a mild form, the vines live throughout the season but produce undersized tubers. In very severe attacks the vines are destroyed before the blossoming period. A thin stand results as well as a reduced yield.

This disease, like the late blight, is carried through the winter in the tubers themselves, and in addition may live in the soil of an affected field during several years. It manifests itself in the potato as a ring or spot, either brown or dark brown, in the vascular tissue near the stem end of the tuber.

When tubers affected as described are stored in a moderately warm, moist cellar the disease continues its growth, resulting in a dry rot. Similar conditions follow when the affected potatoes are shipped south and used for seed. If the soil becomes heated enough before the tubers sprout to favor the growth of the disease within the seed piece, the latter is destroyed before it sprouts, or it may be destroyed after sprouting and result in a weak, stunted plant. Under ordinary conditions the disease spreads from the infected piece to the young rootlets of the plant which it attacks, and even though it may not kill them outright, it fills the vascular bundles so full that the rootlets are choked and become useless to the plant. From the rootlets the disease spreads to the shank or stem of the plant where it chokes the vascular tissue and the plant gradually dies or prematurely matures.

In cases where this disease has been introduced by affected seed, and the same field is used for potatoes the following year, the stand may be perfect with every indication of a good crop, then be followed by "rosetting," wilting, trimming of the lower leaves, with final early maturity of the vines and a crop of culls and seconds to harvest,— all as a result of the disease living over winter in the soil and making its attack on the vines through the small rootlets.

Fusarium blight, like late blight, can not be controlled by treating the seed nor by spraying the tops. The only method for its control is to avoid saving seed from affected fields. Under these conditions the growers in the south who must buy northern seed each year is at the mercy of the northern grower. His only means of knowing whether the seed he is using is infected must be by an examination of the vascular tissue at the stem end of every tuber he plants.

BLACK LEG

The third disease of importance affecting potato tubers for seed purposes is the so-called "black leg." This is a bacterial disease, a micro-organism, that is carried on the rough skin, in wounds, and on broken tubers. Unless a grower in northern Maine happens to notice that a few hills in a field disappear after they are from four to eight inches high he would not know that his potatoes were infected. These same potatoes shipped south to Norfolk, New Jersey or Long Island, where warm, moist conditions often exist early in the season, and planted, make beautiful "come-ups" only to drop out later as if struck by lightning. The work of the above disease shows itself first when the plants are from one to six inches high, the first symptoms being a rolling of the upper leaves followed by the lower ones turning yellow and final death.

When pulled such plants show a more or less blackened or discolored stem below the surface of the ground, the seed piece is usually rotten and the whole plant dies with a soft rot. In northern sections this disease may have destroyed only a few hills in every row, causing the seed piece to rot and in some cases rotting the new tubers.

At digging time the soil surrounding the rotted tubers, the refuse, and the old seed piece, are brought in contact with healthy tubers with the result that they are inoculated and ready to spread the disease still further in the next crop.

Fortunately for the southern grower, who must use these potatoes, this trouble is easily controlled by soaking the tubers before planting in a solution of formaldehyde, for one and one-half hours. The strength of solution to be used is one pint or one pound of 40 per cent. formaldehyde added to thirty gallons of water.

RHIZOCTONIA

The fourth disease that affects the stand of potatoes in a field is the so-called "Rhizoctonia" trouble. By some writers this is called a sterile fungus of the soil. There are but few soils that are free from it and most kinds of plants, even weeds, are injured by it at some period of their growth. In the sterile stage this parasitic plant can be found as brown or black specks attached to the skin of potatoes. These specks can easily be scraped but are not readily washed from the skin of the potato. In this stage they cause more injury to the tuber.

During the summer, about the time the vines are in full bloom, one will frequently find plants which appear to be covered with a mould at or near the surface of the ground. This is the feeding stage of the Rhizoctonia, the form in which it produces its seeds or spores. These spores are scattered broadcast by wind and water. Even in this stage the fungus does not appear to injure the potato plant, but, under certain conditions of soil or weather, there is a period between the resting or dormant stage on the tuber and the fruiting stage on the vine, that this fungus attacks the young sprouts of the seed piece causing the brown cankers on them which frequently kill the sprout. As a rule the trouble will be noticed in a field by the plants coming through the ground very unevenly. An examination of the backward hills reveals the fact that the first sprout has been cankered off near or at the tip and is branching below the cankered spot, or the entire sprout is cankered and new sprouts are starting from the same eye. This effort to send up healthy sprouts may be repeated two or three times with the result of very weak plants or unequalness in the maturity of the delayed plants.

Frequently this disease will appear in small areas covering four or five farms, no matter what the source of the seed, then skip several miles before its injury will be found again.

It has been found that treating the tubers with corrosive sublimate solution* for two hours will destroy the dormant stage or "sclerotia" on the tubers; but this treatment will not reach the same stage of the fungus on old roots in the soil.

Other diseases such as scab, powdery scab, silver scurf and russet, may affect the yield and sale of potatoes but do not, so far as known, often affect the "come-up" of the plant. A few troubles known as "leaf roll," "curly dwarf" and "pindling stems" may be an after effect of one or two of the diseases described above, but as yet the exact cause has not been determined.

The combination of the four diseases described frequently results in very uneven stands in the older potato sections of the country. Some seasons a combination results in total failure to get a stand in these sections. Part of the injury resulting from these diseases can be controlled by the user of the seed. For example, scab and black leg can be eliminated by thoroughly soaking the seed potatoes in the formaldehyde solution, combined with planting on fields that are free from these diseases; but the ill effects of late blight and the Fusarium dry rot can be controlled only by the combined efforts of the grower and user of the seed potatoes. There are cases in which the potato grower who has to depend on northern grown seed is more or less at the mercy of the producer. For example, if the grower in northern New England is careless about growing potatoes for seed purposes on land which grew potatoes affected with Fusarium blight the

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* Corrosive sublimate solution is prepared by boiling two ounces of corrosive sublimate in one gallon of water; when dissolved add the solution to fourteen more gallons of water.

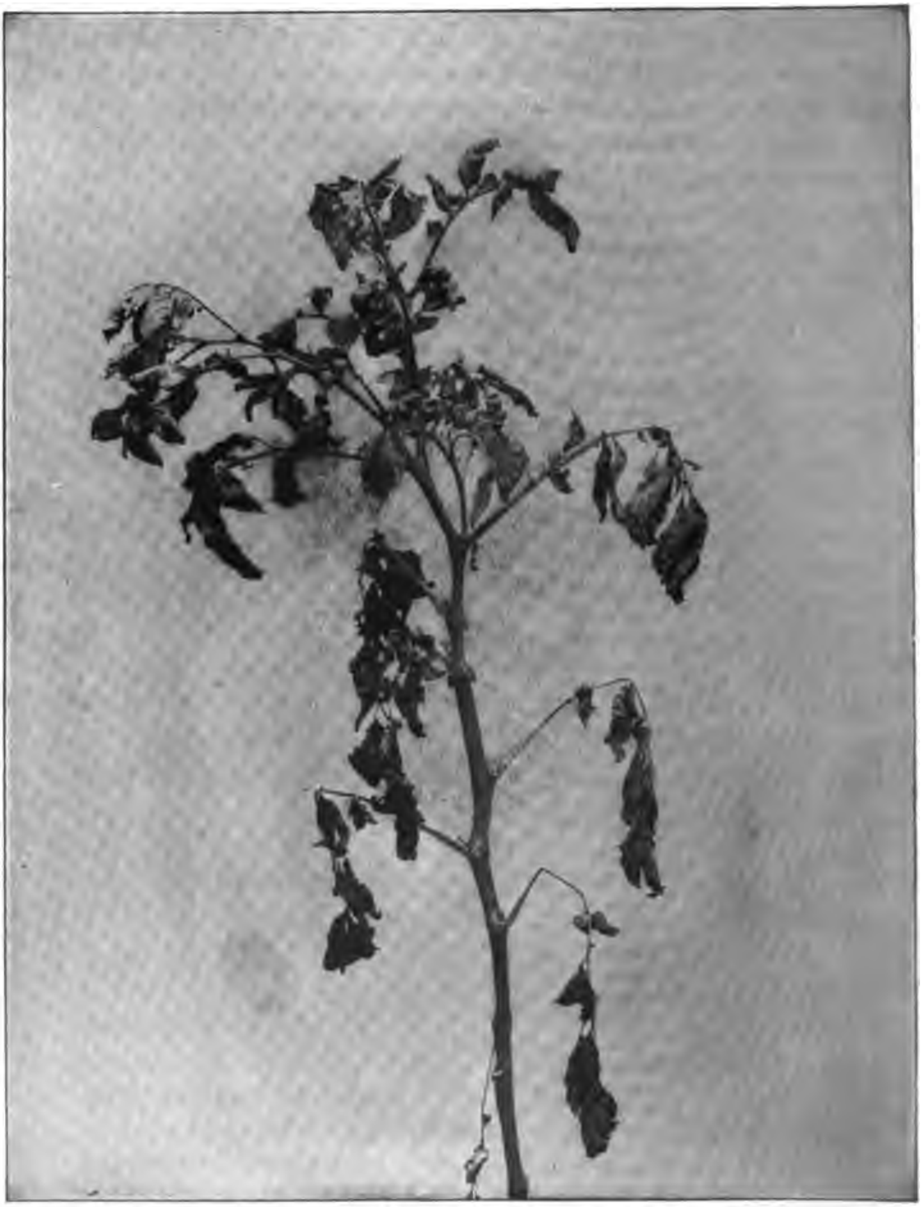

FIG. 10. — POTATO PLANT ATTACKED BY LATE BLIGHT.

previous year, or is careless about spraying thoroughly for late blight, and using methods to protect the tubers from the latter, the grower in the south who purchases these potatoes as good seed stock "gets left." On the other hand if the grower in the north raised his potatoes on new land or in a rotation of several years, sprays thoroughly, destroys tubers which show traces of these diseases when he plants; then it is up to the purchaser of such seed to use the same amount of care and pay a remunerative price for the seed.

At the beginning it was stated that diseases of the potato was one of the causes of a poor stand. Too frequently failure to get a good stand of potatoes on a field is due to carelessness of the grower. Growers are frequently found who may have planted part of their acreage, then been delayed a week or ten days by rains before planting the remainder of the crop. The stand of potatoes where planted before the storm would be good while the later planting would be a failure. These conditions result with both home-grown and new seed. Inquiry usually develops the facts that the soil was all fitted alike, the same fertilizer used and in the same amounts, the seed cut and treated alike,— that is, cut while the land was being fitted and put into bags ready to take to the field,— but in the latter case care was not used to prevent healing of the cut potatoes. The cut potatoes in the bags were piled hit and miss in some building. Fortunately what was planted before the storm did not have time to heat. Frequently this seed may have been slightly affected with some of the diseases described. In such cases the neglect of the seed after cutting favored the growth and spread of same in sacks.

Too much attention can not be given to the care and treatment of seed potatoes when preparing them for planting. The potato should always be dusted as cut with either land plaster or flour of sulphur to dry the cut surface (avoid the use of lime on cut potatoes). In addition, if the seed is put into bags as cut care should be taken to prevent heating in the bags.

Another frequent cause of poor stands in sections where chemical fertilizers are used, is carelessness regarding the methods of applying the fertilizers. A potato planting machine that does not mix the fertilizer with considerable quantities of soil sur-

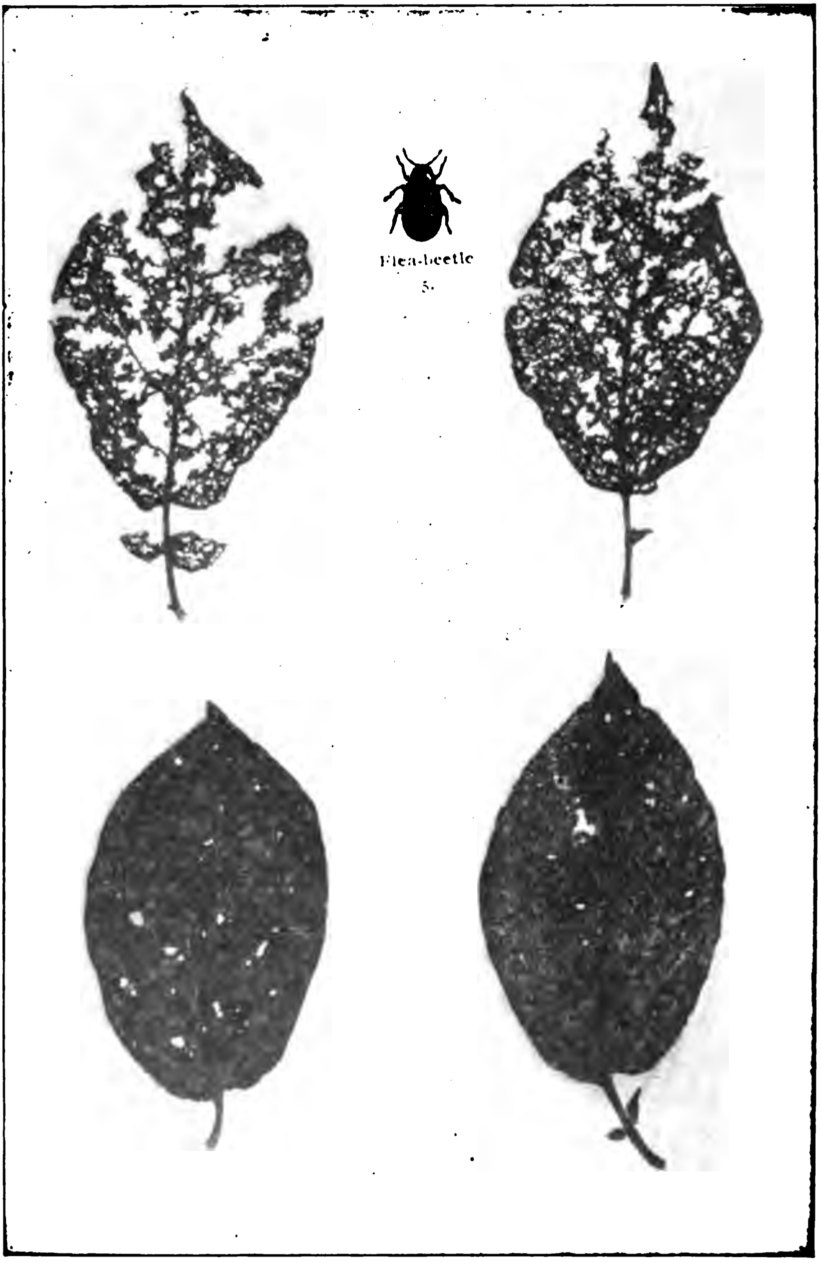

Fig. 11.—The Potato Flea Beetle and Its Work. Upper Leaflets From an Unsprayed Plant, Lower Ones From a Sprayed Plant.

rounding the seed pieces is faulty and frequently results in a poor stand.

Finally, too deep covering in a cold soil may result in a poor "come-up." I have exchanged seed, bushel for bushel, and planted so that the same was planted on adjoining fields. The seed purchased by my neighbor and planted shallow by him came up in a few days and made a good stand, while the bushel of seed from the same sacks planted on the adjoining field at the same time as on the first field, but planted two or three inches deep and covered full depth, made a poor stand. In such cases the tubers may be affected slightly with some disease or low vitality. As a result the seed pieces were destroyed before the sprouts could get to the surface and on their own roots.

NEW EUROPEAN POTATO DISEASES

G. G. Atwood, Albany, N. Y.

Chief, Bureau of Horticulture, State Department of Agriculture

There are two important diseases of the potato that should be most carefully guarded against. Both are known to be very serious in countries where they have become established and every reasonable effort should be made to prevent their finding a foothold in this state.

The causes of the diseases are fungi which reduce or destroy the crop, and the germs may remain in the soil year after year, so that potatoes can not be raised without long rotation.

As no adequate method of control is known and as neither disease has been found here, it is exceedingly desirable to keep them out of the state.

WART DISEASE OF THE POTATO

The first effort made to keep the potato wart disease out of this country was by the Federal Government in September, 1912, when the following order of quarantine was issued:

UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

Federal Horticultural Board

Notice of Quarantine No. 3 (Foreign)

Potato Wart

The fact has been determined by the Acting Secretary of Agriculture that a plant disease known as potato wart, potato canker, black scab, etc., *Chrysophlyctis endobiotica,* Schilb. (Synchytrium endobioticum (Schilb.) Perc.), new to and not heretofore widely prevalent or distributed within and throughout the United States, exists in the following countries, viz, Newfoundland; the islands of St. Pierre and Miquelon; Great Britain, including England, Scotland, Wales, and Ireland; Germany; and Austria-Hungary,

Now, therefore, I, Willet M. Hays, Acting Secretary of Agriculture, under authority conferred by section 7 of the act approved August 20, 1912, known as "The Plant Quarantine Act," do hereby declare that it is necessary, in order to prevent the introduction into the United States of the disease known as potato wart, potato canker, black scab, etc., to forbid the importation into the United States from the hereinbefore-named countries of the following species, viz, the common or Irish potato, *Solonum tuberosum.*

Hereafter, and until further notice, by virtue of said section 7 of the act of Congress approved August 20, 1912, the importation for all purposes of the species and its horticultural varieties is prohibited.

Done at Washington this 20th day of September, 1912.

Witness my hand and the seal of the United States Department of Agriculture.

WILLET M. HAYS,
Acting Secretary of Agriculture

In November, 1912, the Commissioner of Agriculture of New York State issued the following order relative to the potato wart disease:

OFFICIAL NOTICE

STATE OF NEW YORK

DEPARTMENT OF AGRICULTURE

ALBANY, *November* 15, 1912.

To whom it may concern:

Records in this office show that a contagious plant disease known as potato wart, potato canker, black scab, etc., new to and not prevalent or distributed within and throughout the State of New York exists in the following countries, viz: Newfoundland; the islands of St. Pierre and Miquelon; Great Britain, including England, Scotland, Wales and Ireland; Germany and Austria-Hungary.

Now, therefore, under the provisions of sections 304 and 305 of the Agricultural Law, I hereby declare that it is necessary in order to prevent the introduction and spread within the state of New York of the disease known as potato wart, potato canker, black scab, etc., to forbid the bringing into the state of New York for seeding purposes and also to forbid the planting within the state of any potato tubers grown in the above named countries.

CALVIN J. HUSON,
Commissioner of Agriculture

In November, 1912, the Department of Agriculture issued bulletin No. 41, which gave a brief description of the disease, its origin, location and reasons for keeping it out of the state.

With the cooperation of potato growing organizations of the state, grangers and other planters, none of this important European disease of the potato was found during 1913; notwithstanding much publicity was given to the subject. It is not believed that any of this disease has found lodgment in any portion of the state of New York.

POWDERY SCAB

The powdery scab is a new type caused by a parasite (*Spongospora solani* Brunch.) quite different from that causing the common American scab, and has recently been introduced from Europe into Canada and may be found in this country. This differs from the common scab in the character of the spots which are first covered and later break out into brown powdery masses. In many cases this disease forms swellings or excrescences on the tuber. Since it is likely that this will prove to be a quite serious disease it should be carefully watched and promptly reported. (Orton.)

The importance of this disease caused the Federal Government to issue the following notice of quarantine:

UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

FEDERAL HORTICULTURAL BOARD

Notice of Quarantine No. 11 (*Foreign*)

POTATO QUARANTINE

The fact has been determined by the Secretary of Agriculture that injurious potato diseases, including the powdery scab (*Spongospora subterranea*), new to and not heretofore widely prevalent or distributed within and throughout the United States, exist in the Dominion of Canada, Newfoundland, the islands of

St. Pierre and Miquelon, Great Britain, Ireland, and Continental Europe, and are coming to the United States with imported potatoes.

Now, therefore, I, David F. Houston, Secretary of Agriculture, under the authority conferred by section 7 of the act of Congress approved August 20, 1912, known as "The Plant Quarantine Act" (37 United States Statutes at Large, page 315), do hereby declare that it is necessary, in order to prevent the introduction into the United States of such potato diseases, to forbid the importation into the United States, from the countries hereinbefore named, of the common or Irish potato (*Solanum tuberosum*) until such time as it shall have been ascertained, to the satisfaction of the Secretary of Agriculture, that the country or locality from which potatoes are offered for import is free from such potato diseases.

On and after December 24, 1913, and until further notice, by virtue of said section 7 of the act of Congress approved August 20, 1912, the importation, from the countries hereinbefore named, of the common or Irish potato, except for experimental or scientific purposes by the Department of Agriculture, is prohibited: *Provided,* That shipments of such potatoes loaded prior to December 24, 1913, as shown by consular invoices, will be permitted entry up to and including January 15, 1914.

Done at Washington this 22d day of December, 1913.

Witness my hand and the seal of the United States Department of Agriculture.

DAVID F. HOUSTON,
Secretary of Agriculture

At the same time the Federal Government issued the following order relative to the admission of foreign potatoes:

UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

FEDERAL HORTICULTURAL BOARD

ORDER COVERING ADMISSION OF FOREIGN POTATOES UNDER RESTRICTION

The Secretary of Agriculture has determined that the unrestricted importation from any foreign country of the common or

Irish potato grown in the Dominion of Canada, Newfoundland, Great Britain, Ireland, Continental Europe, and other foreign countries, may result in the entry into the United States, its Territories and Districts, of injurious potato diseases, including the powdery scab (*Spongospora subterranea*), and injurious insect pests.

Now, therefore, I, David F. Houston, Secretary of Agriculture, under authority conferred by section 5 of the act of Congress approved August 20, 1912, known as "The Plant Quarantine Act" (37 United States Statutes at Large, page 315), do hereby determine and declare that, on and after January 15, 1914, common or Irish potatoes imported or offered for import into the United States or any of its Territories or Districts shall be subject to all the provisions of sections 1, 2, 3 and 4 of said act of Congress.

Done at Washington this 22d day of December, 1913.

Witness my hand and the seal of the United States Department of Agriculture.

DAVID F. HOUSTON,
Secretary of Agriculture

On March 4, 1914, the Federal government issued a circular giving information that recent surveys established the fact that powdery scab of potatoes exists in portions of Maine adjacent to the Canadian border. The infection found was worse in the extreme northern portion of Aroostook County which is not as important a district as the southern end of the county where also a few scattered cases of disease have appeared. The Maine state authorities in cooperation with the Federal government established a systematic inspection to search out and locate all cases of disease and issued certificates of freedom from powdery scab, and no potatoes known to be diseased are allowed to leave the state. Seed stock will be examined with special care. The subject of control and the system for inspection and certification seems to be adequately provided for. The Honorable J. A. Roberts, Commissioner of Agriculture of Maine, is furnishing this department with lists of all shipments made to the state of New York.

It is known that previous to the discovery of the powdery scab in Maine a portion of the Maine crop had already been distributed.

Of course this distribution was made without knowledge that this disease was in the state. Commissioner Huson is causing the inspection of all Maine potatoes that can be located received prior to March 1. Several lots have already been inspected and no powdery scab has been found. It is not believed that any large number of infected potatoes have come to New York State. It is so important that no diseased potatoes should be planted, that the Commissioner has issued the following warning and suggestions:

"All persons who received potatoes from Maine prior to March 1, 1914, should notify the Commissioner of Agriculture of the fact so that he can arrange an inspection of all such potatoes intended for seeding. Specimens of potatoes that have the appearance of disease should be sent to the Department of Agriculture at Albany with full information relative to their origin, the quantity and the location where they can be examined.

The potato crop in the state of New York is of such vast importance that no planters or other persons would be justified in taking any chances whatever in planting diseased tubers. The wart disease above referred to is known to be very serious and the powdery scab may not be less so. The fungus, when once established in the soil, is likely to remain for several years and it is very difficult and expensive to eradicate it. Up to the present time no adequate means of control is known. This makes it doubly important that only clean, pure seed should be used."

TREATMENT

The common scab (*Oospora scabies*) is too well known to require description further than to say its first appearance is slight swellings on the surface of the tubers. The elevations are found highly colored and increase in size until the skin bursts. The scab area may remain elevated above the surface of the tubers but by the gradual decomposition of the disease they may become sunken pits of greater or less depth.

It has been recommended that seed tubers should be immersed for two hours in a solution containing one pint of 40 per cent. formalin to 30 gallons of water. On removal from the liquid they may be cut and planted at once or they may be spread out to dry and stored for later use. The treated tubers should on no account be allowed to come in contact with receptacles such as old sacks and barrels in which diseased seed has been handled, as they are certain sources of re-infection.

It is believed, however, that the treatment of seed potatoes with the above formalin method is not adequate for the control of the powdery scab. It is therefore recommended that all tubers to be used for seed that have been brought in from Maine or any other section where the disease is known to prevail should be treated with corrosive sublimate as follows: soak the uncut seed one and one-half or two hours in a solution made by dissolving two ounces of corrosive sublimate (bichlorid of mercury) in sixteen gallons of water. This solution is exceedingly poisonous and must be guarded to prevent stock gaining access to it, and in no case should this method be used for potatoes intended for food.

Notice should be sent to the Commissioner of Agriculture, Albany, N. Y., of any suspected cases of disease so that inspection may be promptly made. Full information should be given relative to the origin of any diseased tubers and specimens carefully marked should be sent by mail to the Commissioner of Agriculture for identification and further information.

INFORMATION ADDED NOVEMBER 1, 1915

The following is in continuation of the foregoing article on "New European Potato Diseases."

It was found that the powdery scab had become established and was distributed in a small area in the counties of Clinton and Franklin in the state of New York.

The Federal Horticultural Board placed a quarantine on the state by giving Notice of Quarantine No.18, dated of November 14, 1914. Since the federal quarantine related only to the shipment of potatoes in interstate commerce, the Commissioner of Agriculture followed it by an order of quarantine, dated November 16, 1914, against the shipment of potatoes from the counties of Clinton and Franklin. Regulations were made, however, providing for an inspection and shipment of potatoes that were found free from powdery scab. This work was followed up with care until the quarantine was raised by the Federal Department of

Agriculture to take effect September 1, 1915, since which time no inspection of potatoes for shipment has been made. Careful investigations were made during this period of the location and prevalence of the disease. It was found that on some farms where preventive measures had not been taken, the disease had infected most of the potatoes grown.

As an outgrowth of this work it has been desirable to see if potatoes can be grown free from the powdery scab for seeding purposes, and much information has been collected which will be collated during the winter. This may lead to some arrangement whereby a general inspection of potatoes for seeding can be carried on.

The state and federal governments raised the quarantines owing to the discovery that the powdery scab disease of potatoes was not likely to increase very rapidly under dry conditions such as are found in the higher altitudes. Even in England, where the disease has been very destructive, it is serious only in the lower counties.

Unfortunately this disease does not yield readily to treatment found effective in the control of the common scab of the potatoes, a scab with which all potato growers are familiar. In securing potatoes for seeding purposes, planters should be sure that they are from supplies not affected with powdery scab. A careful rotation of crops is advised, and only the best cultural directions should be followed in growing potatoes in New York State.

When the department has secured all the information possible on the powdery scab disease, a bulletin will be issued on the subject.

FERTILIZERS AND MANURES FOR POTATOES*

EDWARD VAN ALSTYNE, KINDERHOOK, N. Y.

Director of Farmers' Institutes

While available plant food is a most important factor in producing a profitable crop of potatoes, yet it is only one factor. The potato is made up of nearly 75 per cent. water, and without this to draw on, particularly in the last two weeks of growth when the tubers are forming so rapidly, there can not possibly be a full crop no matter what fertilizer is used. Water is necessary also to dissolve plant food in the soil, whether put there by nature or man. This is emphasized in the article on soils. Of the remaining 25 per cent. of the potato, less than 2 per cent. is ash, the balance being starch and refuse. The leaves take carbon and oxygen from the air, the various elements being transformed by the sunshine, and the food which is thus manufactured or transformed is deposited throughout the plant; a large portion going to the enlargement of the underground stems or tubers. This impresses the importance of preserving the foliage from insects or disease as treated by Professors Fulton and Stewart on pages 67 and 79. I call attention to these facts in this connection to make clear that even the most intelligent and liberal application of plant food will come far short of accomplishing what it should if proper preparation of the soil, retention of water and the preservation of the leaf is neglected. Too many are relying on manure or fertilizers at a considerable cost and failing to provide the essentials referred to. With these facts in mind we are ready to consider the subject of " Fertilizers and Manures."

WHAT THE POTATO REMOVES FROM THE SOIL

The old idea was to supply plant food according to what the crop removed from the soil, or what went into its composition. Theoretically this appeared sound; practically it was not, for no account was made of available plant food in the soil, or that obtained from the air. It is easily apparent that on a muck soil deficient in potash, potatoes will require much more of this element in the fertilizer than would be required on one in which potash is abundant, as are most of our New York soils. Again, a soil in best mechanical condition, containing an abundance of organic matter tending to supply nitrogen and help retain moisture as well as to make available mineral plant food, will require a smaller amount of applied fertilizer than will one lacking these.

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* This article was written before potash became so scarce. Special attention is called to article by Dr. L. L. Van Slyke, page 57.

A yield of 150 bushels of potatoes per acre will remove approximately 31.5 pounds of nitrogen, 13.5 pounds of phosphoric acid and 45 pounds of potash from the soil. Accordingly, fertilizer formulas were — and many still are — made on the basis of a goodly amount of nitrogen, a moderate amount of phosphoric acid and a large quantity of potash, ignoring the character of the soil and what it contains as well as the generally established facts known as to the effects of phosphorous on all crops. Unquestionably thousands of dollars have been and are being wasted by buying fertilizers made up on this basis.

THE EFFECT OF THE DIFFERENT ELEMENTS IN PLANT GROWTH

These are relative, not absolute. Nitrogen produces growth in stalk and leaves and is evidenced by a dark rich color; the lack of it by a weak growth and yellow color. It is evident that in order that transformation processes referred to may be carried on with best results there must be a strong growth. Nevertheless, I am convinced that an excess of nitrogen early in the season may do positive harm, particularly if drought follows. It will produce a large top, very succulent, exceedingly susceptible to disease, to sustain which means pumping large quantities of water from the soil. Later there is not sufficient moisture and available plant food to sustain this large top and produce tubers, therefore the plant ripens prematurely and a disappointing yield of tubers results.

Phosphoric acid influences the production of seed, hastens the maturity of the crop, and in the potato is supposed to influence the production of starch. I have come to the conclusion — with which many successful growers and scientists agree — that phosphoric acid is fully as important for potatoes as potash. First, because this is a vitally necessary element in all plant growth, without which plants lack stamina. Second, phosphoric acid is much more deficient in most soils than potash. Third, there may be a tendency for the phosphoric acid to revert or lock up in the soil during prolonged drought. If only a minimum amount is used and rain does not come until shortly before the crop matures, a sufficient quantity will not be available to meet the needs of the tuber in the brief time, as would be the case if a liberal amount were used.

Potash is supposed to make strong the stalks or structure of the plant and to be an important factor in developing starch. Except on muck soils referred to, doubtless 5 per cent. of potash is as much as the potato can profitably use, although most potato formulas contain from 8 to 10 per cent.

Some years ago an experiment was made on Long Island by the State Experiment Station to ascertain facts as to a profitable amount of potash to use on the island where there is much less potash in the soil than over the entire state. Four fields were selected in different sections of the island.

A half ton of fertilizer to the acre was used in each case. On the first plot no potash was used, on the second 4 per cent., third 7 per cent., fourth 10 per cent. In every instance the nitrogen and phosphoric acid were the same. No potash gave a very unsatisfactory yield; 4 per cent. a good one; 7 per cent. better, but not enough more potatoes to pay for the extra 3 per cent.; and 10 per cent. less than 7. There was the same relative return from all the fields. A like application was repeated on the plots for three years in succession, the thought being that the old formula of 10 per cent. had left a residue of potash in the soil. While the yield per acre was less each year as naturally would be expected from successive crops of potatoes, proportionate results were obtained as at first. Many Long Island farmers are in consequence using 5 per cent. potash in their potato fertilizers with excellent results.

ORGANIC MATTER

Having discussed the principles of the essential elements of plant food and their office, before going into detail as to formulas and methods of application, I would emphasize the part organic matter plays in fertility, even though I repeat what has been said by others.

The amount of nitrogen in a soil is always in proportion to the organic matter it contains. Hence, if by the inverted sod, crops plowed under, or stable manures, the soil is filled with organic matter, in the same proportion will the nitrogen content be increased and to that extent the necessity of purchasing the same avoided. It will also produce conditions which will increase the availability of mineral plant food in the soil, thereby reducing the amount of applied fertilizers necessary.

STABLE MANURE

Stable manure has a value beyond the plant food it contains; namely, it provides organic matter. Much city manure as well as that produced on the farms and uncared for, would have little value were it not a source of organic matter. A ton of such manure will not contain much over one dollar's worth of plant food, and without question this can be purchased more cheaply in commercial fertilizers and in fully as available form. If the cost of handling this manure is one dollar a ton in addition to the purchase price, on the majority of farms the organic matter may be more economically secured through green crops turned under. Where the manure comes from the farm and it is properly cared

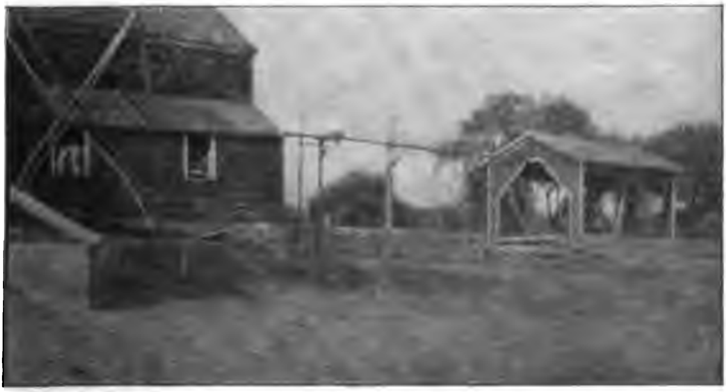

FIG. 12. — MANURE SHED FOR PROPERLY SAVING MANURE ON THE FARM OF DIRECTOR VAN ALSTYNE, KINDERHOOK, N. Y.

for, the farmer has a much more valuable fertilizer produced at small cost. A ton of average cow manure — liquid and solid — contains from eight to ten pounds of nitrogen, six to eight of phosphoric acid and from eight to ten of potash. An application of twelve tons per acre would supply practically the same amount of plant food as a ton of fertilizer analyzing 5 per cent. nitrogen, 4 per cent. phosphoric acid and 6 per cent. potash. It would seem that with such an application of manure it would be unnecessary on a soil rich in organic matter to add nitrogen or much potash. This I have repeatedly proved, finding that 500 pounds per acre of acid phosphate or 450 pounds of the same and 50 pounds of muriate of potash was an intelligent, economical addition. Where manure is not plentiful, half the above quantity per acre supplemented by a half ton per acre of fertilizer 2–10–5 will be better than no manure and all fertilizer or the reverse.

It has been said that manure is injurious to potatoes in making more favorable conditions for the spread of disease germs. This is not necessarily so unless an excessive quantity is used, which in the light of the foregoing will be seen to be unwise from the standpoint of too much nitrogen. If the manure is applied long enough before planting for the elements to disintegrate it, there will be no trouble from disease caused by the manure. If applied shortly before planting, trouble may arise. I have used hundreds of tons of manure on potatoes, applied during the fall or early winter, and have grown as smooth tubers as where commercial fertilizer was used side by side.

Where manure is plentiful and corn is followed by potatoes in rotation, it is a good practice to apply liberal dressings to the corn; then use fertilizers on the potatoes.

LIME

Lime is not a needed fertilizer for potatoes, they being one of the crops which are tolerant of an acid soil; nor is there enough lime in their make-up to call for it as a direct plant food, as is the case with some other crops. While lime is of value as an improver of the mechanical condition of the soil and a liberator of plant food, the bad results often following its use in making more favorable conditions for the development of scab, would far over-balance what good might come from its use as above. Therefore we may dismiss it as a direct fertilizer for potatoes; yet the ability to raise clover often makes the difference between profit and loss in growing potatoes. Lime is many times the key to a clover crop. In such cases, I would advise the use of a half ton per acre of carbonate of lime or 500 pounds of caustic lime applied immediately after the potato crop. This in a three year rotation should not make the land so alkaline as not to unduly favor the growth of scab, and should do much to permanently improve the land through the clover.

SOURCE OF COMMERCIAL PLANT FOODS

I have endeavored to make it apparent that no one can say positively, "this particular formula is correct for potatoes under any or all conditions," since so much depends on the particular soil and its condition. Doubtless a 4–10–5 fertilizer will come as near fitting average conditions as any one can determine. It will make little difference where the phosphoric acid comes from so long as it is available. Usually the cheapest and most available — therefore the best — source is South Carolina rock acid phosphate.

Much stress has been laid on the superiority of sulphate over muriate of potash, on the ground that the clorine in the latter injures the flavor of the potato. Actual tests indicate that unless excessive quantities are used, the muriate has no appreciable ill effects. Since this year there is a difference in price of seven dollars a ton in favor of the muriate, I use and recommend it to others.

Much is left to be desired in the nitrogen content. In most ready-made fertilizers it is purely a matter of conjecture how much of them are from nitrates — quickly available — and how much from an organic source which can not feed the plant until time has produced decay. It is a good practice to have half the nitrogen from nitrate of soda and half from some organic source such as fish scrap or tankage, when one is depending largely on fertilizer and using all of it at one application.

While nitrate of soda is the cheapest source of nitrogen, at present (January, 1914) costing fourteen cents for each pound of nitrogen, and less being lost in transmission than in any other form; yet when it is all applied at time of planting much may be washed away by heavy rains before there are plant roots to take it up. High-grade tankage is a fairly cheap source of organic nitrogen. Dried blood is excellent and more quickly available, but at present prices it will cost more for a pound of nitrogen in this form than in nitrate of soda. Sulphate of ammonia is a little more expensive than nitrate and a desirable form for part of the nitrogen. If there is a clover sod to plow under or manure or other vegetable matter to decay and supply nitrogen late in the season, it may not be necessary to add other nitrogen to be available at that season. In such cases 2 per cent. from nitrate of soda may be sufficient. Personally, if I need to apply commercial nitrogen, I use nitrate of soda in a moderate quantity, about 2 per cent., when planting; then if in midsummer I find from the appearance of the crop that the growth is deficient, I apply more nitrate of soda. This can be readily done with a grain drill, by mixing with the nitrate dry earth or coal ashes, removing the hoes which might interfere with the plants, and sowing in the space between the rows where the feeding roots are. The drilling will take the place of one cultivation making the cost of the second application slight. In this way I use the cheapest, most quickly available form of nitrogen, and do not use it late in the season unless the plant requires it.

HOMEMADE FORMULAS

By mixing at home or buying the ingredients collectively and combining them, from four dollars to ten dollars a ton can be saved over buying goods made after a general formula, and the user knows exactly the source of his plant food.

It does not require an analytical chemist to make the combinations, nor expensive machinery or extra skilled labor to do the mixing.

The following formulas are good and may be suggestive.

	Cost.
250 pounds nitrate of soda — 38 pounds nitrogen	$6 50
100 pounds sulphate ammonia — 20 pounds nitrogen	3 00
350 pounds tankage — 22 pounds nitrogen, 32 pounds phosphoric acid	6 65

	Cost.
1,100 pounds acid phosphate — 154 pounds phosphoric acid...	$6 25
200 pounds muriate potash — 100 pounds potash...........	4 10
Total, 2,000 pounds — 80 pounds nitrogen (4 per cent.), 186 pounds phosphoric acid (9.3 per cent.), 100 pounds potash (5 per cent.)..	$26 50

When sulphate of ammonia can not be readily secured; for late potatoes, or on soils high in organic matter, the following may be beneficial.

	Cost.
125 pounds nitrate of soda — 22 pounds nitrogen...........	$3 25
800 pounds tankage — 50 pounds nitrogen, 72 pounds phosphoric acid	15 20
875 pounds acid phosphate — 121 pounds phosphoric acid...	4 40
200 pounds muriate potash — 100 pounds potash...........	4 10
Total, 2,000 pounds — 72 pounds nitrogen (3.5 per cent.), 193 pounds phosphoric acid (9.65 per cent.), 100 pounds potash (5 per cent.)..	$26 95

The above prices are for carload lots this season, freight included. To this should be added seventy-five cents a ton for mixing. Many other combinations can be easily made.

QUANTITY PER ACRE AND MANNER OF APPLICATION

In using a fertilizer one should always distinguish between which will give a large crop and which a profitable one. The terms are not always synonymous. For instance, a ton per acre may give a larger yield than a half ton, yet the latter may be the more profitable, since the increased yield may not be enough to pay for the extra half ton. Experiments made by Mr. F. A. Sirrine in Suffolk County, Long Island, demonstrated that 1,000 pounds was the most profitable amount to use with potatoes at fifty cents a bushel. Were the price one dollar, the larger quantity might have paid. Under ordinary conditions, a half ton will

Fertiliser	Cost	Increased yield per acre	Money gain
500 pounds..................	$6.25	23.3 bushels	$5.40
1,000 pounds..................	12.50	44.3 bushels	10.60
1,500 pounds..................	18.75	55.4 bushels	8.97
2,000 pounds..................	25.00	61.4 bushels	5.70

usually be found a profitable amount. With manure, 500 pounds applied in the hill or drill is best. With early potatoes, even a half ton may be so applied with profit, the idea being to force them as quickly as possible. Care should always be exercised to keep the seed from coming in direct contact with the fertilizer. Under ordinary conditions it is good practice to apply over 500 pounds broadcast over all the surface, and work it in as deeply as possible; since the tendency of the minerals is to fix very close to where they are applied.

In closing, I would again emphasize the fact that the returns from fertilizer of whatever sort will always be commensurate with the mechanical condition of the soil and the amount of free water it contains.

LACK OF POTASH IN RELATION TO THE GROWING OF POTATOES

Dr. L. L. Van Slyke

Chemist, New York Agricultural Experiment Station, Geneva, N. Y.

Inquiries in regard to the effect of lack of potash on crops indicate that, in general, no serious decrease in crop yields have as yet been observed in case of soils containing fair amounts of potash. This applies, of course, more particularly to clay soil and clay loams. Light soils and muck soils, which contain, as a rule, only small amounts of potash, can not be expected to give good yields without application of some potash and practically with each crop. The use of common salt has been suggested at the rate of 200 to 300 pounds per acre, but results of such use, so far as reported, are not at all decisive.

For those soils that gave good yields of marketable potatoes last year, potato growers are advised to apply 800 to 1000 pounds per acre of a fertilizer containing 3 to 4 per cent of nitrogen and 8 to 10 per cent of available phosphoric acid; one-half of the nitrogen should preferably be in the form of nitrate of soda.

On soils which have had an application, during the summer or fall of 1917, of four or more tons of good farm manure per acre or which have had some green crop, especially leguminous, plowed under, the amount of application can be one-half that given above.

If an attempt is made to grow potatoes on light soils or muck soils, it will be best to apply a fertilizer like the one given above but containing also 2 to 4 per cent of potash.

Potash (K_2O) is costing 30 to 35 cents a pound. At this rate the cost of a fertilizer per ton would be increased by the addition of potash to the following extent:

Per cent of potash	Pounds of potash per ton	Cost of potash
1	20	$6 to $7
2	40	12 to 14
3	60	18 to 21
4	80	24 to 28

As far as possible, it is desirable to select for the growing of potatoes fields that have been giving good yields the last year or two or that are known to be fairly well supplied with potash.

PLANTING AND CULTURAL METHODS

Daniel Dean, Nichols, N. Y.

The potato markets of New York State pay the highest prices for white potatoes of uniform medium size, good cooking quality, free from disease, smooth, shallow-eyed, and flat-round to oblong shape. In New York City potatoes from Long Island sell for from ten to twenty-five cents per bushel more than those from other sections of the state because of their good reputation. Red or pink skin is not objected to in early varieties. For local demand and for farmers able to ship in car lots the increased price due to producing just what the market calls for is an easy way to increase profits from potato growing. The farmer needs the best yielding variety for his soil and climate. Late potatoes in New York are often classed in two groups as blue sprout and white sprout varieties. Blue sprouts have smaller tops that are darker in color and are able to stand a greater degree of heat than the white sprouts. This is leading to the growing of white sprouts in the northern counties, on some of the hilltops of the southern tier, and as an early crop on Long Island. The blue sprout varieties are liable to be coarse unless planted close, and of poorer quality unless well sprayed.

It is commonly believed that potato varieties "run out." This occurs on Long Island and in the southern states where the summer heat is too great. In the rest of New York vigor can be maintained. Where the smaller tubers are used as seed year after year the poorer hills that contain a large number of small tubers furnish an increasing proportion of the seed used each year, and so reduce the yield, causing a gradual "running out." Farmers use small seed because it is cheap. It is possible that the increased yield in any one year from using all large seed might not pay the increased cost. Part of the crop should be planted with large seed to keep up vigor. I have found in Tioga County that selection of the best hills for seed for ten years has greatly increased the yield and improved the sale value of the crop. The Cornell Station and the United States Department of Agri-

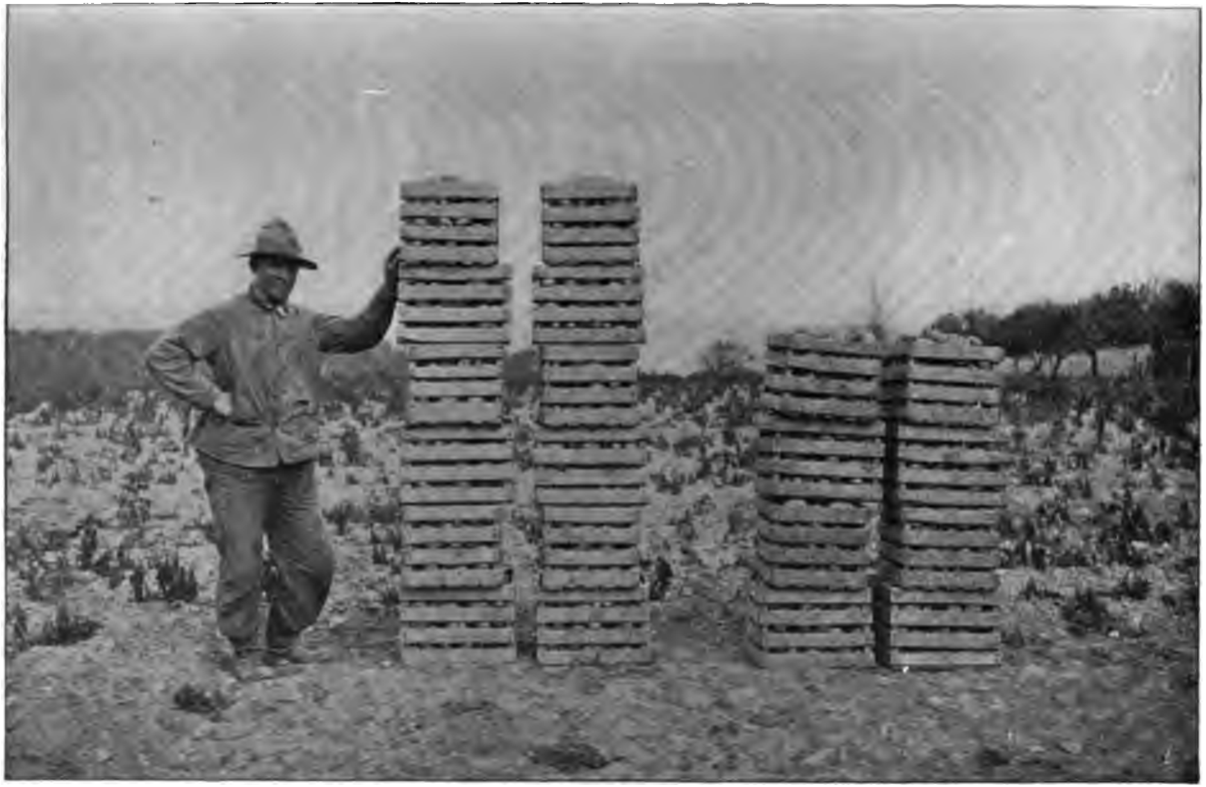

FIG. 13. — POTATOES GROWN BY C. D. WOLCOTT, COHOCTON, N. Y., 1913.

TWELVE CRATES OF POTATOES GROWN IN ROWS 4 AND 5, FROM SEED SELECTED FROM HIGH PRODUCING HILLS ONLY, IN 1912. YIELD AN ACRE 199.835 BUSHELS. EIGHT CRATES OF POTATOES GROWN IN ROWS 6 AND 7, FROM LARGE SEED SELECTED FROM THE BIN, YIELD 140.070 BUSHELS. DIFFERENCE 58.765 BUSHELS. CONDITIONS WERE JUST THE SAME EXCEPT SEED. FROST KILLED VINES SEPTEMBER 9. GREATLY REDUCING THE YIELD.

culture have had the same results. In digging part of the crop, the hills are kept separate and 10 to 20 per cent. of the heaviest saved for seed. Any with rot or poor shape are thrown out. Hills with a few large tubers do not yield as well as those with more and smaller ones and the large stock sells poorly.

This seed is planted in the field by itself next year and the seed plot dug the same way. The small potatoes from this plot are used one year. After a few years the small potatoes "run out" so there would not be enough to plant. The tuber-unit method shows clearly the value of selected seed the first year.

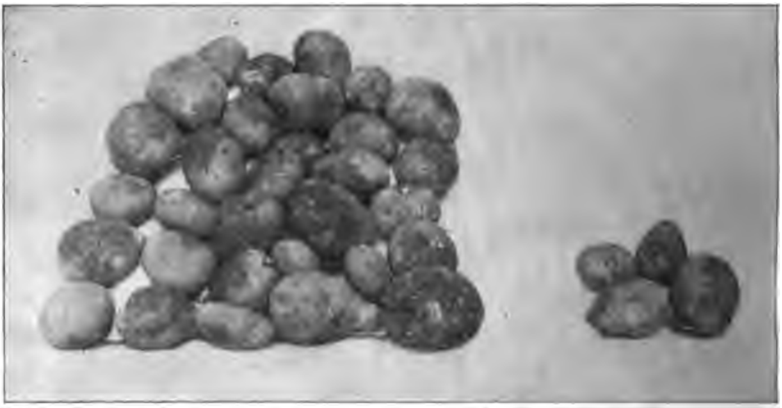

FIG. 14. — SHOWING VARIATION IN THE YIELDING CAPACITY OF TWO INDIVIDUAL TUBERS SELECTED FROM RURAL NEW YORKERS.

There are hundreds of varieties on the market and many new ones produced each year. Out of these a few standard varieties have proved superior under years of test. Among these are the Rural New Yorker No. 2, Carmen No. 3 and Sir Walter Raleigh, blue sprouts; the Green Mountain and Carmen No. 1, white sprouts; and the early varieties Irish Cobbler and Early Rose. New varieties usually being treated better show well at first, but often soon drop behind the old. It is better to test new varieties in a small way while developing the best strains of old and new by hill selection. I have tried over fifty varieties and kept only the Rural.

Potatoes planted in checked hills are a little easier to keep clean than in drills. The larger number of plants in the drill gives a greater yield. Where good soil or care makes the yield above 100 bushels per acre, the tubers from checked hills are usually too large to bring the best prices in city markets. The distance apart in the row should be suited to the size of the crop the soil can be expected to produce. For 150 bushels to the acre 20 to 24 inches; for 200 bushels 16 to 18 inches and for 300 bushels 12 inches or less will produce a size of tuber about right for market. Blue sprout varieties should be planted closer than white sprout. Rows are from 32 to 42 inches apart, closer on rich and valuable land and farther apart on the poorer and cheaper soils.

FIG. 15. — POTATO FIELD OF H. F. HORTON, STEPHENTOWN, RENSSELAER COUNTY, N. Y. FOLIAGE IN PERFECT CONDITION AS A RESULT OF INTELLIGENT FERTILIZATION AND CULTIVATION, FOLLOWED BY THOROUGH AND TIMELY SPRAYING FOR BUGS AND BLIGHT.

Increasing the size of the seed increases the size of the crop. In spring when seed is cheap, large seed pays; when it is high, smaller seed may be used if better care is given in some other way. With very poor soil larger pieces are necessary because the young plants get less help from the soil the first few weeks. Most farmers use eight to ten bushels per acre in checks and twelve to twenty in drills. Seed should not be cut until just before planting and never allowed to dry. The water in the seed is needed to help start the plant. Land plaster or sulphur may be dusted on the cut seed with advantage. Machine and hand planters open the furrow and drop the seed in damp soil. For hand planting, marking one way (best the long way) just ahead of planting and covering with damp soil immediately prevents loss. Picker planters do on cheap land with small round seed. The perfect stand obtained with the two-man planter pays best in other cases. Colorado growers use a cutting-box for cutting seed — see Bulletin No. 175, Experiment Station, Fort Collins, Colorado. This is a box on legs holding several bushels. The bottom is sloping and extends a few inches in front with a narrow board to keep seed from rolling off. A gate regulates the descent of the potatoes. At the front of the bottom a knife is clamped upright so that the workman picks up the seed as it rolls down and cuts it by drawing it against the knife. The cut pieces drop into a crate. This is twice as fast and easier than holding the knife in the hand, as well as resulting in better work. The seed end eyes are the best on the potato, particularly with blue sprouts, and as many pieces as possible should have seed end eyes. Pieces must be cut chunky in shape for planters. Blue sprout seed should have at least two eyes.

Fertilizer pays better on potatoes than on other farm crops besides helping the crops following. In Maine the average amount used is nearly a ton per acre and the average yield over 200 bushels per acre. This amount should not be used unless the soil, seed and care are all good. Less than 500 pounds per acre may be applied in the drill if not touching the seed; more is best put on with a grain drill.

CULTIVATION

The object of different methods of cultivation is to increase yield by preventing injury from weeds and loss of water by evaporation, and by liberating the plant food in the soil. Weeds which grow from seeds are very easily killed if the soil is stirred just before or after they reach the surface. Where potatoes are planted with a planter or other tool which leaves a ridge, a peg-tooth harrow with the teeth slanting back should be run over the rows a few days after planting. The potatoes come up quicker and many weeds are killed. Some farmers use a roller on the ridges with the idea of making the soil water available to start the plants. This is right for the grain crops with their small seeds but not necessary for the large and watery seed-pieces of the potato. It is an injury because potatoes do best in a loose soil — weeds are more easily killed, and the loss of water from the soil is less. Some perennial weeds with root stocks, like quack-grass, are eradicated by plowing both in fall and spring. This so weakens the roots that the cultivator and digger finish them unless in a very wet season.

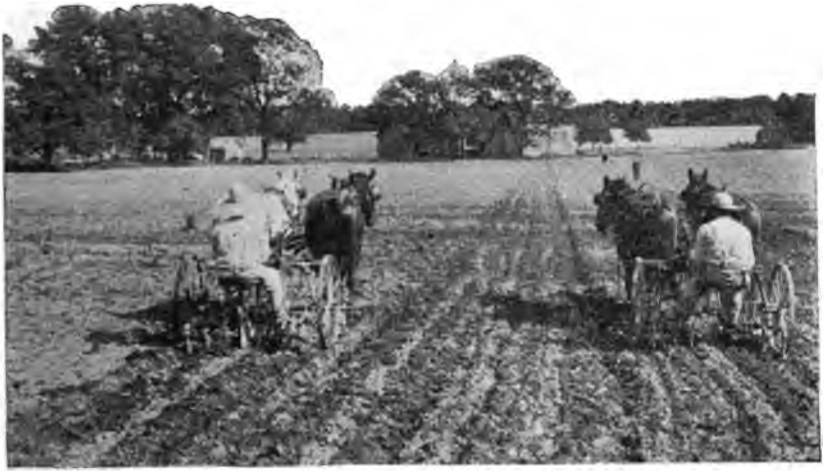

FIG. 16. — PRACTICAL RIDING CULTIVATOR.

There is a time after each rain when the soil is just right for tillage. The soil crumbles easily and all tools, especially the weeder, work more readily than at any other time; the air is cool after the rain so horses can cover much ground in a short time; working the soil at this time saves the water that would soon be lost, and the weeds sprouted by the rain are killed before their roots get a hold on the soil. It pays a potato grower to allow nothing to stop him from working in the potato field at this time. One hour of work now is worth two hours a few days later. The weeder is the best tool in many soils to kill the weeds in the row just as they start. It operates best if used soon after a rain, before the crust hardens. Many farmers have condemned weeders after trying them when the ground was too hard. The cultivator should be run as deep as possible the first time; this is the last chance to work the soil below the surface. After that shallow cultivation after each rain is best until just before blossoming.

With the blossoming of the potato begins the critical period in the life of the plant. The effort to form blossoms and set tubers at the same time is very exhausting. The potato came originally from the high and cool mountains of South America, and is not nearly so well suited to our climate as to that of Europe. The heat of our summers is too great. A period of extremely hot and dry weather in July or August often gives the plant a setback from which it never fully recovers and the yield is reduced. Insects and diseases are often prevalent at this time also.

FIG. 17. — A FIELD MEETING HELD UNDER THE AUSPICES OF THE STATE COLLEGE OF AGRICULTURE, CORNELL UNIVERSITY, ON THE POTATO-BREEDING PLOT OF THE LINCOLN AGRICULTURAL SCHOOL, LINCOLNDALE, NEW YORK.

About this time the roots begin to fill the soil and many are close to the surface. Being out of sight their importance is often forgotten. The ability of the leaves to make starch for the tubers is measured by the amount of water and plant food in solution the roots can furnish. It will surprise any one to make a careful examination and see how many of the roots are destroyed at this time by cultivating or hilling, even when shallow. If part of the roots are cut off when the plant needs them most in dry weather the yield may be reduced one-half or even more. Where stony soil makes hilling necessary it should be done before this time. Hilling is often a last resort to kill the weeds in the row. It pays to kill the weeds by better tillage earlier in the season. The damage is sometimes less if hilling is done three or four days after a heavy rain.

Two common weeds often nearly cover the ground late in summer — sorrel and plantain. Although small in size the damage is often considerable, and they are much worse in sour than in alkaline soils. Lime in moderate amounts applied two or three years before the potato crop will reduce the amount of these weeds without much danger of scab.

PRACTICAL POINTS IN SPRAYING

Profit from spraying depends on spraying at the right time, with the right mixture, and thoroughness in covering every leaf at each application. In a series of years the average profit from spraying is enough to warrant the use of horse-power sprayers on all but small fields. Constant progress is being made in their design, and it will often pay a farmer to alter one to improve its efficiency. A good sprayer should have a pump with capacity enough to develop a pressure of at least 125 pounds while spraying four, five or six rows. It may be advisable to shorten the spray boom to fewer rows. High pressure is necessary for good work. The Maine Experiment Station Bulletin No. 169 states: "A sprayer that does not cover every leaf with a thin film of spray may be practically useless unless this defect can be remedied. The finer the spray and the greater the pressure with which it is thrown, the more effective will be the work. High pressure also tends to drive the mixture in among the leaves thus touching the lower leaves which are usually infected first, and better coating both sides of the leaves which is very important."

The pump should be as simple as possible, made of brass, outside the tank, preferably with single-acting, outside-packed cylinders. Triplex pumps are easy on team and machine. The spray boom should be adjustable in height above the tops and have an arrangement for shifting instantly from side to side. These are both absolutely necessary for good work with tops of different sizes, for work on side hills and in windy weather. The sprayer should drive from both wheels. One-horse sprayers are seldom advisable, as two-horse machines do much better work.

One nozzle to the row is enough while the tops are small. But with large tops two or more nozzles to the row are necessary, since a single unsprayed leaf may produce in a blight season enough spores to rot many potatoes. Probably the best arrangement is that of one nozzle on either side of each row pointing in diagonally so that the two cones of spray cover all the leaves.

To prevent loss by the sprayer wheels injuring large tops, an apparatus is easily made. A hardwood 2 by 4 is fastened by hinges to the under side of the sprayer frame in front of the wheels. An old hay-rake tooth or heavier curved iron is attached to this on either side of each wheel with the points just touching the ground. Trial will show just how far ahead of the wheels to place these to prevent their interfering with the tops. A lever lifts the teeth from the ground at the ends of the rows for turning and for travelling.*

Potatoes intended for storage should not be dug until the skins have set. In blight seasons the tops should be dead at least ten days before digging or rot may result. A number of rod type elevator diggers do good work, unless the soil contains many flat stones.

Potatoes should be dry when put in storage, and kept cool, in darkness and well ventilated. In fall and spring cellar doors should be open nights and shut days. Seed potatoes that are sprouted lose vigor rapidly. The gain in yield causes many growers to keep their seed in cold storage in spring. It pays all growers to give their seed extra care.

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* The International Harvester Co. can furnish heavy ½-inch teeth.

POTATO INSECTS

BENTLEY B. FULTON

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The insects affecting the potato may be divided for convenience into four classes, according to their relation to the plant. These are as follows: insects chewing the leaves, insects sucking the leaves and tips, stalk borers, and insects affecting the tubers. The Colorado potato-beetle and the flea-beetles are the only ones which are commonly injurious in this state. The others are not serious pests and attract attention only in certain years or in favorable localities.

INSECTS CHEWING THE LEAVES

The Colorado potato-beetle (*Leptinotarsa decimlineat* Say.)

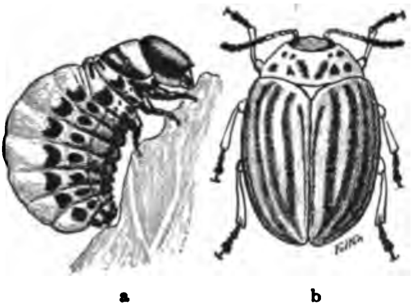

FIG. 18. — LARVA (A) AND ADULT (B) OF THE COLORADO POTATO-BEETLE.

This is by far the most familiar and widely distributed of all the enemies of the potato, and is of interest because it is responsible for the use of arsenicals as insecticides. Until about 1855 this insect occurred only in the Rocky Mountain region, where it fed on wild plants of the potato family. It acquired a taste for potatoes and spread rapidly eastward, and by 1872 had reached New York, but was not generally destructive until 1876.

Both the adult beetles and the larvae devour the leaves, thus checking the growth of the tubers and affecting their quality so that they are watery when cooked. In this latitude there are two generations in a year. The adult beetles hibernate through the winter in the ground, usually not more than eight or ten inches below the surface. They emerge early in the spring and fly about. When the potatoes have started above ground they begin to feed, and in a few days the females lay eggs on the under sides of the young leaves. The eggs hatch in from four days to a week or more. The larva pass through four stages or instars and are mature in from sixteen days to three weeks, according to the weather. They then go into the ground and transform into the pupa or resting stage, in which they remain at least a week — usually longer — before coming out as the adult beetles. The egg-laying period lasts about thirty-five or forty days, and each female lays from 500 to 1000 eggs. The minimum time for the life cycle is about four weeks. The beetles of the second generation emerge early in autumn, feed a few weeks and then go into the ground to hibernate.

Control.—This insect is easily controlled by adding an arsenical poison to the bordeaux mixture, which should be regularly applied to control fungus diseases. Poison is usually necessary only for the first two regular sprayings, but should be added at any time the beetle becomes numerous. The first application should be made when the plants are six to eight inches high, and the second should follow ten to fourteen days later.

The best time to put on the first spray can be ascertained with more accuracy by watching the eggs until they begin to hatch in good numbers. If spraying is made too early the larvae hatching later may go up to the tip which has grown out since the spray and thus escape from eating the poison. On the other hand the spraying should not be delayed too long because the larvae can do a great amount of damage in a short time and the larger ones are much harder to kill. With each 50 gallons of bordeaux use one or two pounds of paris green, three to five pounds of arsenate of lead or two quarts of arsenite of soda solution, which can be made according to the formula:

White arsenic	1 pound
Sal soda (washing soda)	4 pounds
Water	1 gallon

Boil the mixture until the arsenic is all dissolved — 15 or 20 minutes.

Flea-beetles

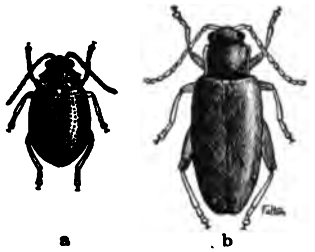

FIG. 19. — TWO COMMON POTATO FLEA BEETLES. *Epitrix cucumeris* (a) and *Systena hudsonias* (b).

There are several species of flea-beetles which feed on the young potato plants. Of these the most widely known is the potato or cucumber flea-beetle (*Epitrix cucumeris* Harris). Two other members of the same genus, the tobacco flea-beetle (*Epitrix parvula* Fab.) and the egg-plant flea beetle (*Epitrix fuscula* Cr.) are known as potato pests farther south. In this state a larger, more elongated flea-beetle (*Systena hudsonias* Forst.) has been found quite troublesome.

The life history and habits of all the above species are similar and the methods of control the same. The adult beetles hibernate during the winter under leaves and rubbish, and in early spring come out and lay eggs on the roots of weeds belonging to some family of plants as the potato. The larvae mine into the roots; when full grown they pupate and later emerge as adult flea-beetles. There are two or three generations in a year.

The injury to the potatoes is caused by the adult beetles, which attack the plants when they are only a few inches high and eat numerous small, round holes in the leaves. The beetles stay mostly on the under sides of the leaves, and their presence is best detected by their work. The larvae occasionally do injury by mining into the tubers and causing pimply potatoes.

Control.—The remedies recommended for the Colorado potato-beetle will also partly control the flea-beetles. Bordeaux acts as an excellent repellent for them, but since they usually feed on the under sides of the leaves and do not eat through the upper epidermis, they find many parts of the leaves which have not been touched by the spray. This emphasizes the need of thorough spraying so as to cover as much of the plant as possible. When the flea-beetles attack the plants very early it may be deemed advisable to give the young plants an application of bordeaux earlier than is recommended for the Colorado potato-beetle. The feeding of the flea-beetles also contributes to the injury known as tip burn.

It is advisable to keep the farm cleared of all weeds of the potato family *(Solanaceae)* on which the flea-beetles breed. These include nightshade, horse nettle, bitter-sweet or blue bind weed, ground cherry, jimson weed and others.

Blister-Beetles (*Epicauta and Macrobasis*)

There are several species of blister-beetles which sometime become numerous enough to be injurious. These were well known long before the Colorado potato-beetle became important and are called "old-fashioned potato-bugs." They are all medium sized, elongated beetles, and the various species are differently colored. One of the most common is striped; others are light or dark gray, black or spotted.

While the adults may do some damage in eating the plants, the larvae of these insects are decidedly beneficial in destroying the egg masses of grasshoppers. The female deposits a large number of eggs in a small cavity in the ground. The young hatching from these are provided with legs and crawl about until they find a grasshopper's egg mass. They feed on the eggs and at the first molt their legs become rudimentary and they complete the remainder of their larval development as helpless grubs surrounded by an abundance of food. There is one brood a year.

Control.— The blister-beetles are not apt to be troublesome on plants that have been regularly sprayed. If they appear suddenly in large numbers as sometimes happens, a prompt application of an arsenical is advisable.

The Three-lined Leaf-beetle (*Lema trilineata* Oliv)

This insect is like the Colorado potato-beetle in that both the larvae and adults feed on the leaves. The beetle is smaller, more elongated, and has only three black lines on a yellow ground color. The larva is distinguished by having its back covered with its own excrement. There are two broods each year. The beetles come out in spring and lay their eggs on the underside of the leaves along the veins. The larvae of the first brood appear in June and those of the second brood in August. The adults of the second brood hibernate over winter.

Control.— This insect is easily controlled by an application of one of the arsenicals, and is regularly destroyed by the same spray that is made for the Colorado potato-beetle.

Tortoise-beetles (Cassida and Coptocycla)

A few species of small green, gold, or black beetles of the above genera are sometimes found feeding on potato leaves but are of minor importance. They are broadly oval in shape and the flaring edges of the thorax and wing covers give some resemblance to a tortoise shell. They are not injurious in regularly sprayed plantings.

INSECTS SUCKING THE LEAVES AND TIPS

The Potato Plant-louse (Macrosiphum solanifolii Ashm.)

In occasional years potatoes suffer from the attack of large numbers of plant lice or aphids. They are very small, soft-bodied insects of a yellowish-green color and they cluster in large numbers on the stem, leaf and blossom stalks. They begin to appear in destructive numbers about the first of August, and when conditions are favorable to their increase they cause serious injury by killing the tips for a distance of four to six inches. The period of severest attack is over by the middle of September. A severe outbreak of this insect occurred in the northern part of this state in 1908. In most years it is kept under control by natural checks, such as rainy weather, predacious and parasitic insects and parasitic fungi.

The full life history* has not been definitely worked out, but it is known that the lice come to the potatoes about the middle of July from some other plant. They develop wings and leave about the middle of September. The eggs, in which stage the winter is passed, are fastened to shepherd's purse, and possibly other weeds.

Control.— The contact insecticides, such as tobacco extract, soap and kerosene emulsion will kill these insects, but in view of their rapid increase and short time in which they occur on potatoes in destructive numbers it hardly seems practical to make such an application. Since it is known that the eggs are fastened to weeds, fall plowing and the burning over grassy or weedy places near the potato field would be advisable in sections where this insect is abundant. The wounds made by the beaks of the plant lice render the plant more susceptible to diseases and increases the need of thorough spraying with bordeaux.

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* **Patch, Maine, Agricultural Experiment Station Bulletin 147.**

Leaf-hoppers

Leaf-hoppers when numerous do some injury to the tops both by sucking the juices and in making wounds which facilitate the entrance of fungus and bacterial diseases. The species found most common on potatoes in this section is *Empoasca mali* Le Baron. This is a small, elongate, pale-green insect which is very active and can jump or fly readily. They have never been destructive enough to require a special treatment.

INSECTS BORING IN THE STALK

The Potato Stalk Weevil (Trichobaris trinotata Say.)

The larvae of this insect bore into the stalks and do considerable damage in a great many sections. It is most numerous in states south of New York, but it may become occasionally destructive in the southern portions of this state.

The adults are small, ash-gray beetles with a long snout. They appear in spring and eat holes in the base of the stalk with the mouth and deposit an egg in each. Small white grubs hatch from these and bore into the main stalk and branches. Near the middle of August when the grubs are full grown, they form cocoons near the base of the stalk and pupate. They mature a few weeks later but the adults remain in the stalk until the following spring.

Control.— The best remedy is to rake up the stalks in fall and burn them, thus destroying the hibernating beetles. Since this insect also feeds on jimson weed, horse nettle and other *Solanaceae*, such weeds should be kept cut.

The Stalk Borer (Papaipema nitella Gn.)

This is a gray moth, the larvae of which bore into the stems of potato and a great variety of plants, including tomato, corn, cotton, grasses and numerous weeds. The potato is probably not its normal food plant, but when the weeds are destroyed it attacks whatever is available.

The eggs are laid in fall on grasses and weeds in masses of fifty or sixty. The larva first mines the leaves and then works down into the stalk. They frequently leave one plant and migrate to another. When mature the larva eats a hole in the side of the stalk and pupates. Adults emerge late in August. There is only one generation each year.

Control.— Since this insect lives on such a large number of weeds, the best method of control is clean cultivation. Infested weeds which have been cut should be destroyed to prevent the larvae from migrating. Large numbers of parasites live on the larvae and kill so many that it is seldom destructive.

INSECTS AFFECTING THE TUBERS

White Grubs and Wireworms

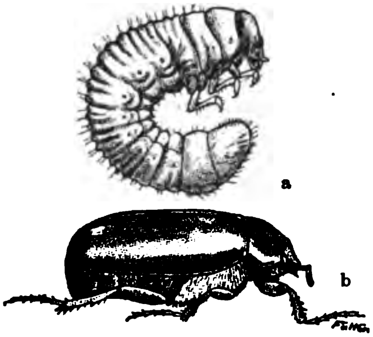


FIG. 20. — WHITE GRUB (A) AND MAY BEETLE (B).

The white grubs are the large, soft-bodied larvae of May-beetles or June-bugs. They feed on the roots of numerous plants and sometimes eat into the tubers of the potato, especially in newly-plowed sod ground.

The eggs are usually laid in sod ground in June and hatch in about two weeks. The grubs feed on the roots and require two summers to become full grown. They pass the first winter deep in the ground. The second-year grubs are larger and more destructive than the first, so that land left in sod one year is apt to be badly infested the second year. Sometimes in June or July of the second year the grub pupates and in about three weeks becomes an adult beetle, but remains in the ground until the following spring. There is but one brood every three years, but all stages may be found in the ground each year.

Wireworms are the long, hard, cylindrical larvae of the click beetles. There are a number of common species with similar habits and appearance. Like the white grubs, they normally live in sod ground and feed on roots, and generally are not injurious to potatoes unless the ground has been in sod a year or two before.

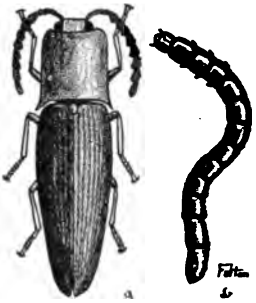


FIG. 21. — CLICK BEETLE (A) AND WIREWORM (B).

The life history is very much like that of the white grubs. The eggs are laid on sod ground and the larvae require from three to five years to mature. They transform to adults under ground in midsummer, but usually remain in the soil until the following spring.

Control.— Since the white grubs and wireworms have very similar life histories, the methods for their control are about the same. A rotation of crops is the best method to prevent their increase, and ground that has been in sod should be followed for a year or two with buckwheat or other small grains not seriously injured by them. Infested ground should be plowed in late summer or early fall and thoroughly harrowed in fall and early spring.

POTATO DISEASES IN NEW YORK STATE

M. F. Barrus

Professor of Plant Pathology, Cornell University, Ithaca

At least ten diseases occur on potatoes in New York State, though fortunately not all are serious ones.

Late blight and rot is the most destructive disease, but it occurs in epidemic form in wet years only, though it persists without doing much harm through dry seasons. It causes a blackening and dying of the foliage and sometimes the stems, and a dry rot of the tubers.

It is caused by a fungus, *Phytophthora infestans,* which lives over winter in a more or less dormant condition as a threadlike growth in the decayed areas of affected tubers. When such tubers are planted the fungus continues its growth into the sprouts and produces its fruiting bodies as a mildewy growth on stems above ground. The spores formed here are easily blown about, some of them falling on potato foliage. If moisture is present they germinate and enter the leaf tissue causing the blight above described. On the under surface of the blighted leaf more mildew appears upon which are formed myriads of spores that are scattered to other vines and infect them. Spores that fall on wet soil are carried down into it and coming into contact with the new tubers enter them and produce the rot.

Infection of foliage and tubers takes place only during periods of rainy or exceedingly moist weather and this should be taken into consideration in attempting to control the disease. To prevent tubers from rotting, the vines must be kept from blighting. As vines can become infected from spores carried from adjoining fields, spraying is the only practicable means of control. The vines should be sprayed with bordeaux, 5-5-50 strength, from the time they are eight inches high until growth ceases in the fall.

Early blight, caused by the fungus *Macrosporium solani* is a typical leaf spot of the foliage, the spots having concentric rings like a target board. These spots may become very numerous and run together so that the leaves die of blight. In case the attack is early the tubers are small, and in any case the crop light. Spraying with bordeaux, as recommended for late blight, will control this disease.

Tip burn is a name applied to the dry, brittle, and blackened condition of the tips of the leaves though the dead areas may extend around the margins. It is sometimes called dry weather blight. It is a physiological trouble, due to excessive loss of water from foliage during dry weather, particularly when this follows a warm, wet period. Frequent sprayings with bordeaux is reported to have reduced this disease, especially when the soil has been frequently stirred by shallow cultivation to conserve soil moisture.

Scab is a disease caused by a soil bacterium, *Streptothrix scabies,* that produces a roughened, scabby, or pitted condition on the surface of the tuber. The diseased area may be slight or may involve the entire surface. The parasite causing this disease is able to live for several years in the soil especially if it be in an alkaline condition, and to live on the affected tuber over winter. Select tubers as scab-free as possible for seed. Treat two hours in a solution of formaldehyde made by diluting one pint of 40 per cent. formaldehyde in thirty gallons water or one and one-half hours in corrosive sublimate solution made by dissolving 4 ounces powdered corrosive sublimate in 30 gallons water. Plant treated tubers in land that is free from scab or that has not been planted to potatoes for several years. Where it is necessary to apply lime for other crops, this should be done immediately after digging the tubers. Lime in any form, wood ashes, and manure from animals fed scabby tubers should not be applied to potato soil.

Fusarium wilt is a disease affecting the sap carrying vessels of the plant, discoloring them, and rendering them incapable of performing their functions, thus causing the vines to wilt. The disease can be recognized in the tubers if when a cut is made across the stem end, a dark ring of diseased sap vessels from a quarter to a half inch below the surface of the skin is observed around the slice.

A dry, wrinkled, sunken rot of the tubers beginning where they have been wounded is reported to be due to a species of Fusarium and is called "Fusarium dry rot." All affected tubers should be rigidly excluded for seed purposes and rotation of crops should be practiced.

Other and perhaps less serious diseases of the potato are (a) *Rhizoctonia,* forming numerous small black bodies or scurf on the surface of tubers, cankers on stems below ground and sometimes the formation of small potatoes on stems above ground; (b) *black leg,* a disease appearing as a blackening and withering of the lower portion of stalk, and dying of the vines, and sometimes a decay of the tuber; (c) *silver scurf* showing as dark areas containing minute black pimples on surface of tubers, which later shrivel and take on a silvery appearance; (d) *internal brown rot* characterized by dry brown spots scattered throughout the flesh of tuber, a disease associated with an improper distribution of water in the tuber during some period of its growth; (e) *pimply potatoes* caused by minute worms called "eelworms" or "nematodes" producing pimply or knotty conditions of the tuber.

A serious disease known as *leaf roll* occurs in some western states as well as in Europe. The disease, as the name indicates, is caused by an upward rolling of the leaf blade upon the midrib and also by the foliage changing to an unhealthy yellow color often tinged with purple or red.

Two foreign diseases,—one the *powdery scab,* in which the scab spots upon maturity become powdery, being quite different from the common scab, and the other the *potato wart* in which case irregular warty excrescences are found on the tubers, sometimes entirely destroying them,—are liable to be introduced into this country and perhaps already have. As there is no known way of controlling them, growers should report any suspicious cases. The strict quarantine of all European potatoes from infested areas will now prevent such diseased tubers from being shipped into this country and introduced into our soil.

CONTROL MEASURES

As soil organisms parasitic upon potatoes are readily introduced into the soil through successive plantings, it is highly important that a rotation of crops be practiced, potatoes appearing once in three or four years, with a meadow crop intervening. Where destructive soil troubles are present a much wider rotation with potatoes is necessary.

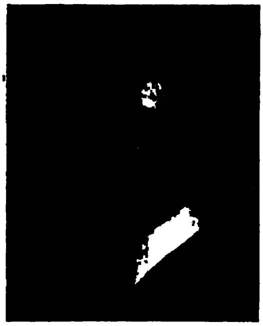
The seed selected for planting should be as free as possible from disease and injuries of all kinds. It is highly desirable to select seed from fields known to produce perfectly healthy plants. If on cultivating the tubers the Fusarium wilt appears common, the entire stock from the same source should be discarded for seed purposes. As a precaution against scab and black leg the seed should be treated before cutting, by soaking for two hours in a solution of formaldehyde made by diluting one pint of 40 per cent. formaldehyde in 30 gallons of water, or one and one-half hours in a solution of corrosive sublimate made by dissolving 4 ounces of the poison in 30 gallons of water. Probably the corrosive sublimate solution is the more desirable to use as it destroys not only scab but also the black leg organisms and the sclerotia of Rhizoctonia on the tubers. It must be frequently renewed, however, as it loses strength rapidly with use, and care should be taken that the solution and the tubers treated in it are not consumed by farm animals.

The plants should be thoroughly sprayed with bordeaux mixture 5-5-50 from the time they are eight inches high until growth has ceased. About 40 gallons of the mixture per acre is sufficient for the first application but the amount should be increased as the vines become larger. A fog should be made of the mixture as it comes from the nozzle if thorough work is to be accomplished. In dry seasons, applications made once in two weeks is sufficient, but in wet weather they must be made oftener. It is important that the spraying be done before rainy periods set in. One should not hesitate to spray in the fall even though it is necessary to drive over the spreading vines in the row to do so. Although blights are not troublesome during dry seasons, it has been shown by repeated experiments conducted by the New York Agricultural Experiment Station at Geneva that spraying during such seasons more than pays for the expense involved. When potato bugs appear add either 2 pounds paris green, 4 pounds arsenate of lead paste, 2 pounds arsenite of zinc, or 2 quarts of arsenite of soda to 50 gallons of bordeaux mixture.

SPRAYING

Professor F. C. Stewart

Botanist, New York Agricultural Experiment Station, Geneva, N. Y.



Heavy losses result from the ravages of blight, rot, "bugs" and flea beetles. There are several kinds of potato blight. The three principal forms occurring in New York are early blight, late blight and tip burn. Early blight is a fungus disease which attacks only the tops. Late blight, also, is a fungus disease which is most destructive in wet seasons. This kind of blight is often followed by tuber rot resulting from fungus spores which fall from the blighted leaves onto the ground and are carried down through the soil to the tubers by the agency of rain. Tip burn is a dry weather trouble in which the tips and margins of the leaves turn brown and die. The destructive "bugs," or Colorado beetles, are too well known to require description. Flea beetles are small, black, jumping beetles which gnaw numerous small holes in the leaves.

For all of the above troubles spraying with bordeaux mixture containing an insecticide is the best method of control. Spraying is of so much importance that it should never be omitted. It is one of the necessary operations in the culture of potatoes, particularly late potatoes. Bordeaux mixture prevents late blight, checks early blight, lessens the loss from rot, greatly reduces the ravages of flea beetles, prevents paris green injury, assists in the control of bugs, partially controls tip burn, stimulates the plants and increases the yield.

That spraying with bordeaux mixture is highly profitable is shown by the results of experiments made by the New York Agricultural Experiment Station. During nine consecutive years the Station, in cooperation with farmers, conducted potato spraying experiments in which an account was kept of the expense of

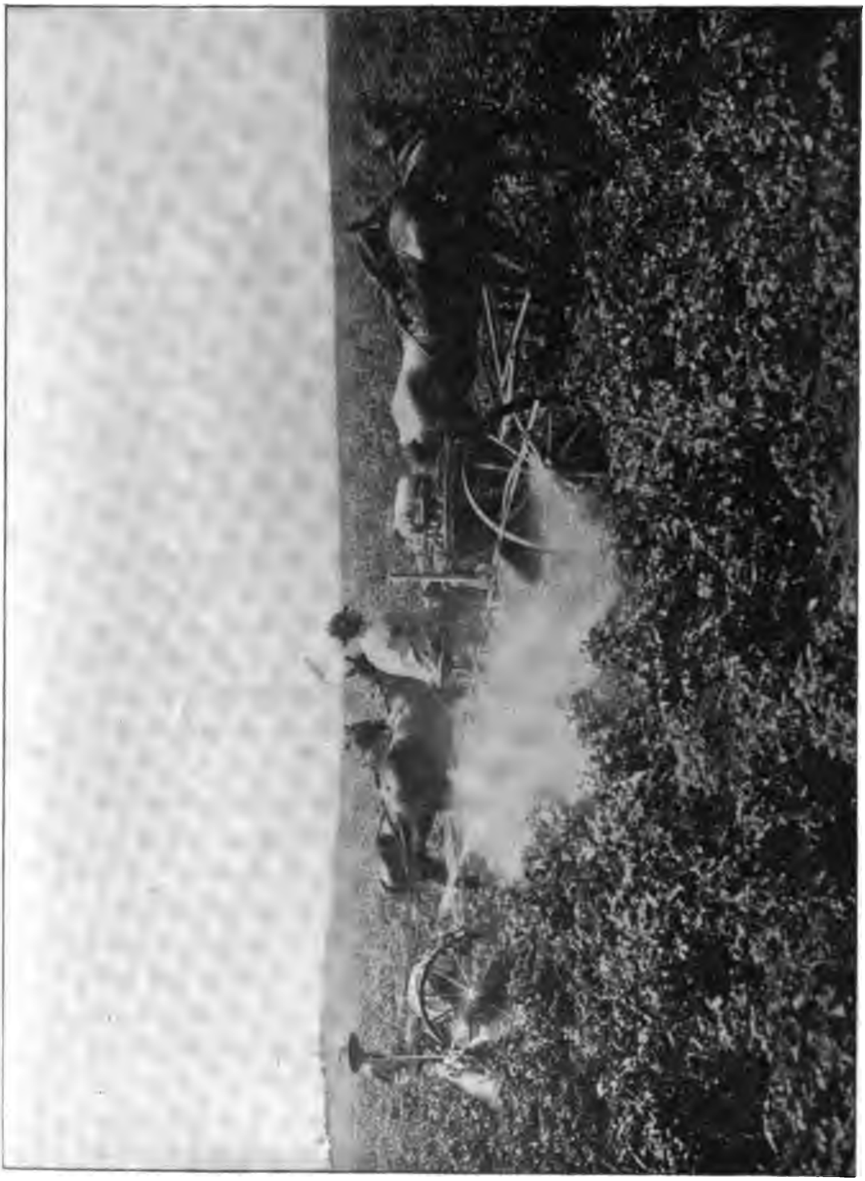


FIG. 22. — A GOOD AND A POOR HORSE-POWER SPRAYER.

spraying and the returns from it. In all, 114 such experiments were made. The average increase in yield due to spraying was 36.1 bushels per acre; the average expense of spraying, $4.74 per acre; and the average net profit, $14.43 per acre. It is believed that the average net profit from spraying would have been considerably larger had it been properly done in all of the experiments. Horse-power sprayers were used in these experiments. By very thorough spraying, such as may be done with hand sprayers, much larger gains may be obtained. In the so-called "ten-year experiments" on the Experiment Station farm at Geneva five to seven thorough sprayings with a knapsack sprayer increased the average yield 97.5 bushels per acre.

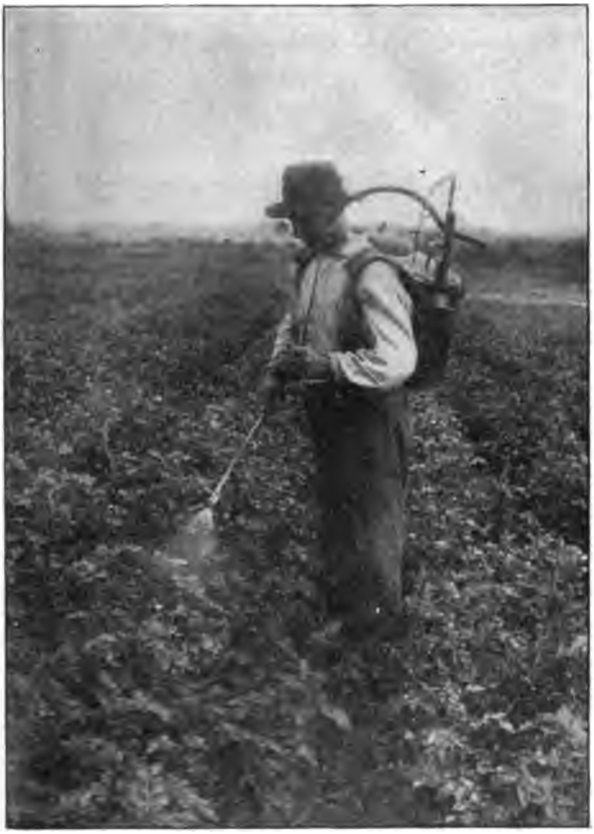


FIG. 23. — SPRAYING POTATOES WITH A KNAPSACK SPRAYER.

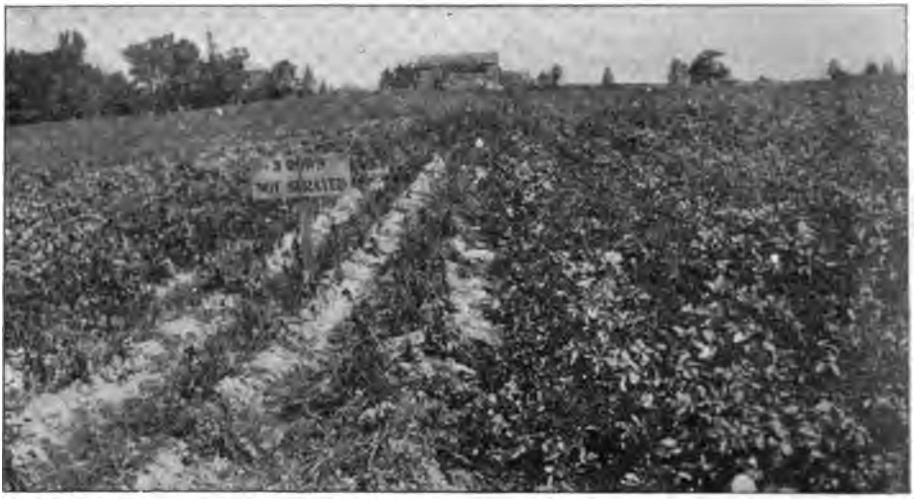


FIG. 24. — FARMER'S EXPERIMENT AT WEST HENRIETTA IN 1904. GAIN FROM SPRAYING, 130 BUSHELS PER ACRE.

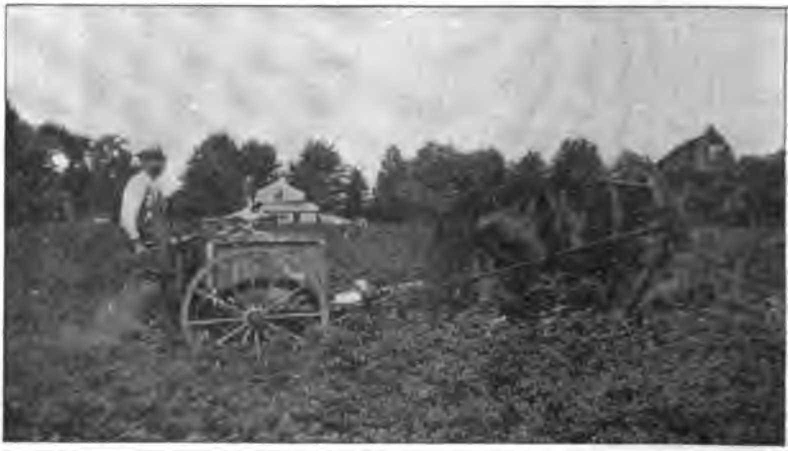


FIG. 25. — SPRAYER USED IN THE WEST HENRIETTA EXPERIMENT

Spraying should be commenced with the appearance of the first brood of "bugs" which is, usually, when the plants are six to eight inches high. Subsequent applications should be made at intervals of ten to fourteen days in order to keep the plants well covered with bordeaux throughout the season. During epidemics of blight it may be advisable to spray as often as once a week. Usually, about six applications will be required. The bordeaux should contain four pounds of copper sulphate to each fifty gallons in the first two sprayings and six pounds in subsequent sprayings. Whenever "bugs" or flea beetles are plentiful add one or two pounds of paris green, two quarts of arsenite of soda stock solution or three to five pounds of arsenate of lead to the quantity of bordeaux required to spray an acre.

The arsenite of soda stock solution is prepared by boiling together (for about twenty minutes) one pound of white arsenic and four pounds of sal soda in one gallon of water. This makes a cheap, effective poison; but it should be used only with bordeaux mixture. Used in any other way it burns the foliage.

None of the ready-made bordeaux mixtures on the market are as good as the homemade. Neither can the lime-sulphur solution be profitably substituted for bordeaux in spraying potatoes. It dwarfs the plants and lowers the yield.

The kind of sprayer which it is best to use depends chiefly on the acreage to be sprayed. For gardens and fields of less than one acre a four-gallon compressed air sprayer or a knapsack sprayer is the proper thing. On fields of a few acres one may use a spray pump mounted in a barrel which is drawn through the field in a light wagon. The pump should be supplied with two long leads of hose. A man standing in the wagon pumps and drives while two other men, walking, direct the spray nozzles, covering several rows at each passage through the field. Though expensive, this method of spraying is profitable because of the thoroughness with which the work can be done. For fields of ten or more acres a power sprayer of some kind is required. There are on the market several kinds of good horse-power sprayers. Small gasoline engines, also, are used.

Thoroughness of application is to be desired at all times, but is especially important when flea beetles are numerous or the

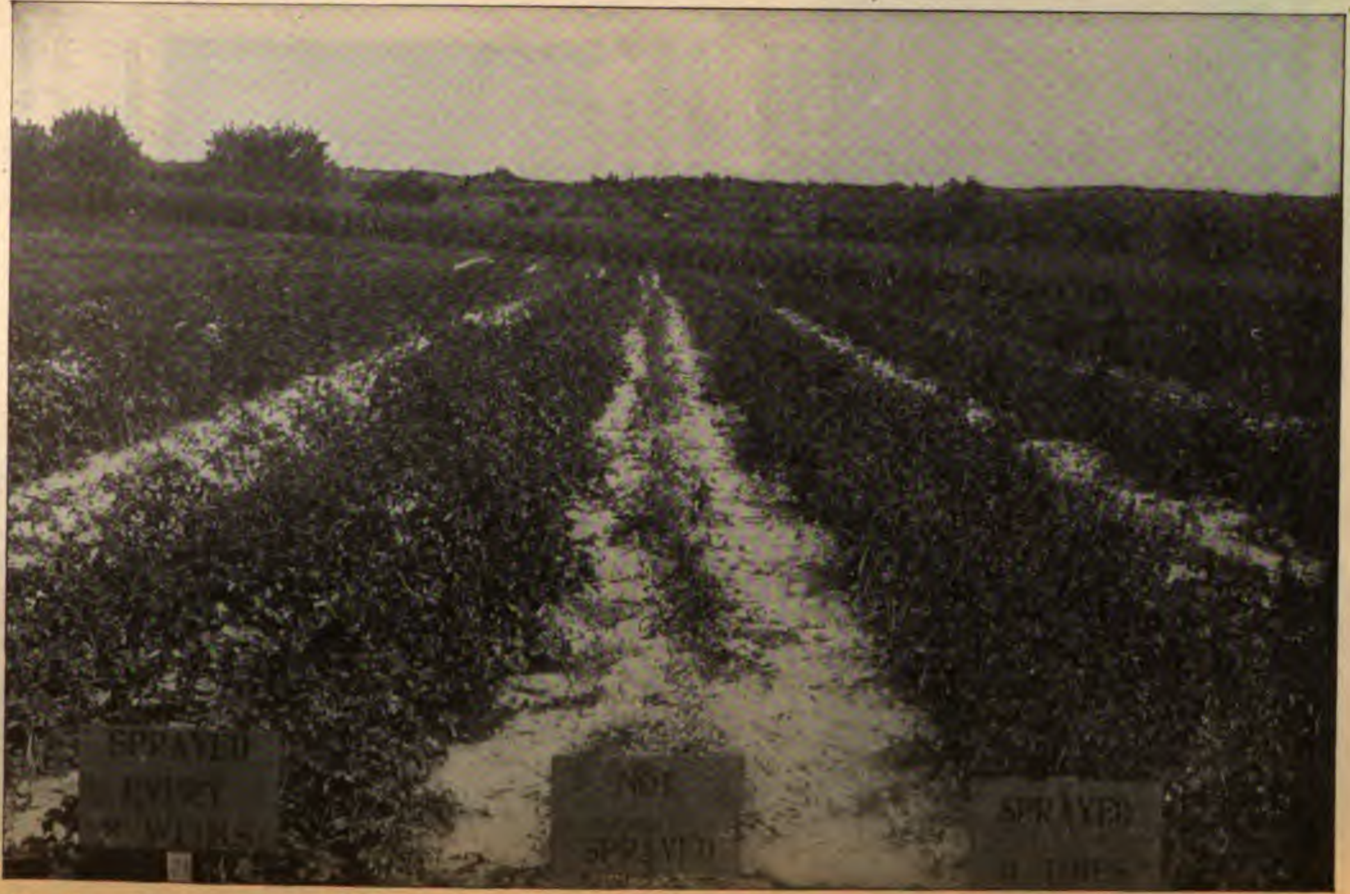


FIG. 26. — POTATO SPRAYING EXPERIMENT AT GENEVA IN 1904. ACRE YIELDS (LEFT TO RIGHT): 380 BUSHELS, 161 BUSHELS AND 350 BUSHELS.

weather favorable to late blight. The more frequently and thoroughly the plants are sprayed the better. There is no danger of injuring the foliage by too much spraying. Using the same quantity of bordeaux, frequent light applications are likely to be more effective than heavier applications at long intervals; for example, when a horse-power sprayer carrying a single nozzle per row is used, it is better to go over the plants once a week than to make a double spraying once in two weeks. In the first two sprayings, while the plants are small, one nozzle per row may be sufficient; but when the plants become large at least two nozzles per row should be used. Large vines are especially liable to blight and should be sprayed very thoroughly. Such vines may be somewhat injured by the wheels of the sprayer, but the benefit from spraying will far outweigh the damage done.

A single spraying is better than none and will usually be profitable, but more are better. Spraying may prove highly profitable even though the blight is only partially prevented; it is unsafe to postpone it until blight appears. For the best results, spraying should be continued as long as the plants live, and it is a mistake to discontinue because the weather is dry and no late blight present. A late attack of blight may result in heavy loss from rot. As a rule, those who spray most obtain the largest net profit.

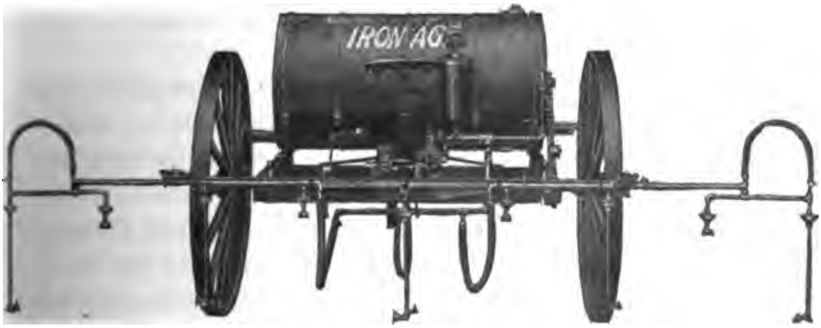


FIG. 27. —LOW NOZZLE TRACTION SPRAYER.

ESSENTIALS IN MARKETING

R. H. Cooper, Riverhead, N. Y.

General Manager, Long Island Potato Exchange

For the past few years there has been a great deal of talk about the "High Cost of Living" and the "Middleman's Large Profits," until it has reached the point that the average farmer and consumer believes the "middleman" is the actual cause of high prices, while in reality the farmer and the consumer are probably as much to blame as the middleman.

The subject has not been gone into deep enough, and the root of the trouble has not been reached by simply showing the difference between the selling prices of the farmer and the cost to the consumer. There is a much more vital question to consider, and that is, "What makes this great difference in price necessary?"

Before trying to answer that question let us see what the conditions are as they stand today, employing "potatoes" as a subject to work on, they being the staple article of food in this and most countries.

In the first place, the housewife sends to the corner grocer for potatoes, and instead of ordering a peck or more will buy a two quart basket at,—say twenty cents. When she gets the potatoes home she finds some too small for use and possibly others showing some rot or bruise, making a few unfit for use, and thereby adding still more to the cost of the potatoes that had not been taken into consideration as it did not appear on the face of the bill. Let the housewife demand "quality," and that will be the first step towards reducing the cost of living.

Twenty cents for two quarts of potatoes, the staple food of the "common people," certainly seems like an outrageous price, yet when you stop to consider that there are three or four grocery and fruit stores in about every block in Greater New York, all of which must make a living, it stands to reason that with several stores to supply a small area which could be handled by one, they must get together and charge high prices for staples, in order to pay the expense of delivering small packages on which there is only a fraction of a cent profit. Very often it costs more for a grocer to deliver a package than the profit amounts to. He must make up that loss somewhere, and as he can not do it on standard packages, such as clothes pins and breakfast foods, he has to make his profits from bulk goods, such as potatoes.

The large profits are made by the retail and not the wholesale dealers who are the distributors between the farmer and the retailer, and who are erroneously dubbed "The Middlemen." The "middleman" — which really includes the retailer — is usually considered by the unthinking public to be a man, ready and willing at all times to do the farmer, while in reality he is a very necessary factor in this great game of chance. The railroads, with their exorbitant freight and demurrage rates, have as much to do with the high cost of living as anyone. The profits derived by the commission houses and wholesale dealers, however, is larger than it should be in a great many cases, and a part of this is due to crooked methods that can only be overcome by regulation. The Cole Commission Law is regulating this, to some extent, by trying to hold down the crooks in the commission game, but that will only take care of a small part of the trouble. We will have to have methods in marketing that will not give opportunities for the crooks to work on.

There are too many retail grocery stores and fruit stands. Competition, as a rule, is the life of trade, but in this case there is so much of it that it is necessary to charge exhorbitant prices in order to make so many places pay, while a less number of places could do a profitable business at prices within the reach of all.

Regulate the number of retail stores within a certain district so that such high prices need not be charged, and you have the second step towards reducing the cost of living.

As stated before, we must have the middleman, and what is more, most reasonable thinking farmers agree to this fact. How much show would an inexperienced farmer have, if he should try to market his crops direct to the consumer? The question is not hard to answer. There have been a great many attempts made along these lines, one just recently in Brooklyn in connection with the Housewife's League, but all have gone down as miserable failures. The reasons for these failures are numerous, but one in particular is the lack of interest shown by the housewife, who does not want to travel a mile or two to a market, and who is not to be blamed when she can have a grocer call at her house for her order and deliver the goods. Therefore, we must have this "terrible middleman" as the best medium for the marketing of crops, and if the agitators for lowering the cost of living would give their time and money towards helping to regulate and systematize the art of marketing, more good would be done towards reducing the cost of living, than by continually knocking the middleman.

There should be a national vegetable exchange organized to regulate prices and shipments, which would prevent markets from becoming glutted and carload after carload of produce from going to waste, as happens every year. Stop all of this waste and you have another step towards reducing the cost of living. If there is a over-supply of vegetables in the country, then they should be kept on the farm and used for fertilizer, rather than shipped into the city yards to rot and be carted to the dumps, adding more expense to the shipper, receiver and consumer, which in the end goes back at the farmer.

Think of the loss sustained every year by the farmer and shipper through the unscrupulous dealers in our produce yards, who make it a practice to buy heavily on high markets in order that they may turn down the cars upon arrival, on account of a lower market or through some pretense or another, and then either buy them in again themselves, at a great reduction in price, or have their pals do it for them. This loss, in the end, is borne by the consumer, and some form of regulation should be arranged whereby such underhand dealers as well as crooked shippers could be held in their places and not allowed to ruin markets and upset trade in general.

The Long Island Potato Exchange was organized in 1908, not to try to control the market nor to set prices, but to try to regulate shipments and prices by working in league with the dealers in and around Brooklyn and New York, but, until within the past year or two, it met with little or no success simply because the motive was misunderstood and the workings of the exchange misrepresented to the trade by some of the independent shippers who were trying to feather their own nests at the expense of others, and who did not have the interest of the farmer nor the public at heart.

The exchange work on Long Island, however, is only a local matter and can not expect to, nor does it intend to try to stop the evils of the produce business that are countrywide. As stated before what we need is a national association. It should be organized in New York City, and from there spread to other cities. This would have a controlling influence over the farmer, the shipper, the broker and the receiver.

We have well organized exchanges controlling the marketing of wheat, oats, corn and other grains, as well as cotton, oil, etc., which settle their differences by a board of adjusters; therefore, what is to prevent an exchange being organized to control the marketing of the four staple vegetables, namely potatoes, cabbage, onions and turnips, under one head? Stop to consider what a grand thing it would be for all those who are trying to do an honest business. Roughly outlined, the plan would be as follows:

First of all have an exchange well organized and incorporated along the lines of the New York Produce Exchange, with able and experienced men for officers and directors and a careful and hard working manager whose motto would be, "succeed or die in the traces." Appoint a board of adjusters experienced in the handling of the various lines controlled by the exchange, to settle disputes; then enroll as members, at a membership fee with yearly dues, all shippers, brokers and receivers ready to comply with the rulings of the exchange.

The benefits derived from such an organization would be innumerable, a few of which are as follows:

Four blackboards would be maintained, one for each of the staples, on which would appear the names of the different shippers, and each morning the shippers having offerings would send a telegram to the exchange, giving his products and prices desired, which would be placed after his name on the board, giving all the brokers and receivers who had "seats" on the floor an opportunity to buy what they wanted without going to the expense of telegraphing so many shippers for prices. Then again, the shipper would save this same expense in being obliged only to wire his offerings to the one place. It would be a ruling of the exchange that the shippers should deal only through brokers and dealers listed as members of the exchange, and vice versa. It would be a further ruling that shippers and brokers should not sell to dealers black-listed by the exchange as undesirable to the best interests of the trade. Such ruling would also apply to "short weight" shippers and those who make a practice of sending cars of poor produce to the market. The exchange could then put a stop to the practice of turning down cars on dropping markets, as well as satisfactorily adjust the shipments of poor cars, etc., and the ruling of the exchange would be final.

Such an exchange, well managed, would have the effect, not only of holding down crooked dealers, but by working in league with similar exchanges in the principal cities could control conditions, so that by daily notifying the shippers of the existing situation, there would be no glutted markets, trade would be steadier and losses less, enabling business to be done on a smaller profit than at present, with the result that the consumer would be benefited, and another step towards reducing the cost of living would be accomplished.

It seems strange, when everybody is working for the same end — namely that of bettering conditions for all — that there will be people who will call such a proposition as the above a "pipe dream," still there will be some who will uphold and others who will oppose it. Such an organization, however, must and will be brought into existence before very long, and with proper support it will succeed. It will mean work and fight, but any deed worth accomplishing is worth working and fighting for. It will require the support of some of the big dealers and shippers, men of influence, to make the undertaking a success, but as quite a few of the dealers have expressed their opinions in favor of such an exchange, it may not be a hard proposition to start the ball rolling, especially as broker, shipper, receiver and jobber will be benefited.

Such an exchange could also use influence in bringing about changes in legislation, as well as changes in transportation, heater-car service, etc., that would be beneficial to shipper as well as dealers. In fact, a thousand and one things could be put under control and conducted in an honest, business-like way, that are now run with no head or tail.

Nearly all grain sold in bulk is inspected and weighed by government inspectors and certificates of weights and grades of cars sent with each invoice, so that the buyer knows what he is getting, and any shipper who tries to be crooked has to answer to Uncle Sam. If such a thing can be done with grain, why can it not be done with potatoes and other staples? Automatic scales could be installed at different points of the railroad hauling such produce, and a running weight taken when the cars go into the country light, and the weights and car numbers sent to the inspector of that section so that he could "tare" each car properly when loaded.

The trade today is demanding such a move as this, and nothing can right conditions but an exchange that will be impartial in its rulings. Small organizations in different sections will never answer the purpose. It will have to be done along the lines suggested herein; and what is more, it can and will be done.

SUCCESSFUL COOPERATIVE MARKETING

W. H. Ingling, Freehold, N. J.

General Manager, Monmouth County Farmers Exchange

The Monmouth County Farmers Exchange is a cooperative association organized and incorporated under the laws of New Jersey March 3, 1908, for the purpose of marketing the principal products of the 1,275 farmers who compose its membership.

It is capitalized at $100,000, 20,000 shares at a par value of $5 each.

It operates a territory of possibly 500 square miles in central New Jersey extending through the counties of Monmouth, Middlesex, Mercer, and parts of Ocean and Burlington counties.

This section is one of the largest producing centers of farm products in the state, and the output of the Exchange for 1913 was over 2,600 carloads consisting for the most part of Irish potatoes, though apples, pears, asparagus, berries, melons, sweet corn, pickles and other miscellaneous crops were included.

In addition to its activities in selling the products of its members it is also deeply interested in buying their seed potatoes, grass seed, all insecticides and fungicides, hampers, barrels, lime, manure and other needful goods, and manufacturing their fertilizers from the purest and highest grades of chemicals that are to be procured, thus insuring to the farmer a pure fertilizer without adulteration or filler of any kind and one that builds up the soil of his farm and produces better results every year, because every pound of material that enters into its composition is the best of plant food. Beside this it saves the grower in price from three to six dollars per ton. This branch of the business is becoming of great value to the members and increases every year.

The general supervision of the entire business is under the direction of the board of fifteen directors who are elected annually by the stockholders.

The administration of the details of the business is left to the general manager who is appointed by the board of directors. The system followed in conducting this immense business is a simple one and has proven very effective.

The Exchange has thirty shipping points that extend thirty miles west from the general office situated at Freehold, N. J., along the lines of the Pennsylvania Railroad and twenty miles east along the Central Railroad of New Jersey. All of these stations are connected with the general office by telephone. During the shipping season an agent-inspector is in charge of all shipments and inspection at each loading station and is appointed by the board of directors each year.

The shipping season begins with asparagus the latter part of April continuing with the various crops until about July 15 when the heavier shipments of white potatoes begin and continue until near October 1, when the last of the crops have been marketed.

The members deliver their potatoes or other products to the agent-inspector at the several stations and are given a receipt for them showing gross, tare and net weight. The products are then loaded into the cars for shipment according to their grade by the agent, who reports to the general office at the close of each day the details of his day's work. The local agent keeps in close touch with the general office by telephone throughout the day and informs the manager the probable extent of his loading. At 5 o'clock, the shipping hour, the agent notifies the manager by telephone what cars are loaded and ready to be shipped and receives his billing directions.

The manager and his assistant in the meantime have issued their quotations by telephone or telegraph to all of the salesmen of the Exchange and to the principal wholesale jobbers and dealers in all the markets east of the Mississippi river where there is a demand for the Exchange goods. The quotations are based on the supply and demand of the large markets, information from these markets being received daily from representatives of the Exchange located in these centers as to the conditions prevailing and the possible offerings and supplies received from other producing sections.

By the close telephone communication with our loading stations and the direct connection with our salesmen and wholesale buyers throughout the country maintained by telephone and telegraph, we have the necessary information to form a conclusion as to the proper quotation to make to secure the highest market price.

The greater part of the output is sold f. o. b. loading station, the exceptions being ungraded goods and miscellaneous shipments of small vegetables and fruits which are sent to our selling agents to be sold on commission. The expenses are met by a small percentage withheld on the general sales.

When the business of the day is over the prices obtained are averaged and the farmer is credited with the average price for the same grade and variety of goods no matter where they may have been loaded. The bills of lading are sent to the general office in order that the invoices and drafts may be sent out the same night. The price is given to each agent every morning for the goods shipped the day before, and the agent notifies the growers.

Some of the advantages that have been obtained for our membership by cooperation are:

1. A forecast of the crops in the different producing sections of the country that has proven of great value to the Exchange in placing their products in the best markets.

2. Distribution at primary points to many consuming centers rather than congestion in a few is one of the most valuable results. Under the old system the producer sold to the local dealer who sold to his jobber and he became the distributor. The exchange plan takes the profit of the local receiver and jobber and puts it in the hands of the farmer.

3. Knowledge of markets from day to day during the shipping season enables the Exchange to place its products where the most active demand and the highest prices are found, thus maintaining values and preventing to some extent at least, the violent fluctuations of markets that are so prevalent where indiscriminate shipments are made.

4. By grouping the products of several hundred growers in any section and handling them through a cooperative organization of their own, commands the attention of the largest trade in all parts of the country and thereby widens the markets and increases the price.

5. Cooperation encourages the growing of a higher quality of fruits and vegetables and putting them on the market in uniform packages and a standard pack and grade. When this is fully accomplished, farm products can be put on the market under

a registered brand of the organization that will bring a better price and create a demand for the goods that will be largely in excess of present shipments and greatly to the profit of the producer.

6. Cooperative action enables the grower to make his sales f. o. b. shipping point in all of the markets of the United States and Canada and places in his hand the power to control the rate of dispersal to any and all of them, and thus he predetermines the destination of his products, thereby preventing depressions of the markets by unwise distribution and untimely shipments.

7. Cooperatively the grower is in a much more advantageous position to secure the regulation of railroad rates and increased transportation facilities than if he worked independently.

Having been in business six years we have a fair basis on which to show just what a cooperative organization honestly conducted may accomplish for the producers of farm products.

Beginning business in July, 1908, with a paid-in capital of $7,000 and a membership of 300, our first year's trade amounted to $454,414.11. It has increased in volume every year until the present time, and for 1913 amounts to $1,053,256.16 with a net profit of $15,485.55. It has paid a dividend of 5 per cent. for four years and for 1913 paid 6 per cent. The first year there was no dividend declared.

Taking the six years since our organization, we have done a total business of $5,374,004.25 at an average expense of 1.82 per cent. and have paid to our members for their potatoes an average price of 60½ cents per bushel or $1.66½ per barrel of 165 pounds. For the sake of comparison we have gone over the records for the six years previous to the organization of the Exchange from 1902 to 1907 inclusive and find the average price paid the farmer for potatoes was only 42½ cents per bushel or $1.16½ per barrel, a difference of 50 cents per barrel or 18 cents per bushel in favor of cooperative marketing. In addition to the advantage in higher prices for their crops the value of farm lands have increased from $100 and $150 per acre to $250 and $300 per acre.

We have handled in the six years 13,990 careloads of products.

Total shipments of potatoes, bushels.........	5,914,307
Total shipments of apples and pears, bushels...	177,270

Total shipments of asparagus, bunches........	1,098,286
Total shipments of miscellaneous, packages....	47,381
Total sales of seed potatoes, bushels...........	355,388
Total sales of fertilizers, 5 years, tons........	15,592
Total amount of business....................	$5,374,004.25

We have not only sold the products of our members but are manufacturing for them from the best materials that can be purchased, a pure fertilizer of the highest quality, without a filler of any description. The evidence of quality and value of our goods is shown in the results obtained by every one who uses them, and this evidence is greatly strengthened and confirmed by the State Experiment Station in its last report. The Station value is given for our 4-8-10 analysis, as $30.33 per ton exclusive of bags and mixing costs, and places our product as the highest of any given in the bulletin, when the price for which it is sold, $30 per ton, is taken into consideration. To win this position for our brand of fertilizers in four years, we think, is an attainment worth while. If these results are true, and they must be as they are taken from the records, our organization has profited our members on potatoes alone $1,075,328 and on fertilizers to the extent of $57,776, a total of $1,133,104.

Our financial standing at the close of business on November 30, 1913, was:

Capital stock	$75,450 00
Surplus and undivided profits.................	34,087 52
Total	$109,537 52

We have brought about this magnificent result by using directly all of the markets to be found, by reaching out our arms 1,300 miles away, along the Gulf of Mexico, in the valleys of the Mississippi, through the cotton fields of the South, over the plains of the Middle West, on the shores of the Great lakes, through the waters of Hampton Roads, along the coast of the Atlantic Ocean, beyond the rock-ribbed coast of Maine, and returning through the manufacturing centers of the eastern states brought with them a steady flow of dollars, hundreds, thousands, yes millions of dollars for the pockets of our membership.

CORTLAND COUNTY POTATO GROWERS' ASSOCIATION

E. H. FORRISTALL, CORTLAND, N. Y.

Agriculturist, Cortland County, N. Y.

From practical experience and observation, I see the necessity of more thorough knowledge of potato growing by the New York State farmers, especially along the line of seed growing and selection of which there is an ever increasing demand. The potato can very properly be one of the crops grown in the rotation on a dairy farm, and it is a crop that can safely be relied on, when planted on our pastures that need cultivation, new life and reseeding. As an industry, it will be a long time before our average yield per acre will reach that of European countries. Nor is it essential at present. When a demand is made on our farmers for any product and at a price that they can raise this product, then and only then, speaking in a broad sense, will there be increased production per acre. Nevertheless, we are making advances along the line of production due to the untiring efforts of the departments of agriculture and experimental stations, and the attention of the seed potato grower is constantly being drawn to the fact that quality must always be foremost in the requirements of seed potato production.

New York State ought to lead in the production of seed stock. It should be a matter of common interest to individual farmers or organized associations to cooperate in producing a seed stock that will meet the demands of the large producers for our city markets, also attract the attention of the southern truck growers. Such seed stock will, from necessity, have to be the varieties best adapted to those localities, and true to name.

Other influencing factors will be the preparation of seed bed, fertilization, treatment of seed for the prevention of diseases, cultivation, spraying, hill selection for increased production, and proper storage facilities.

Spraying with bordeaux mixture for early and late blight will produce a better crop. The quality of the potato is materially increased when the plant is carried to maturity. The blight, if allowed to attack that part of the plant above ground, cuts off the crop in proportion to its premature development. Therefore, spraying is an insurance for better crop and against loss by decay.

By hill selection we mean the digging of each hill separately, and selecting for seed only those having the larger number of medium-sized tubers.

As to storage, seed stock should be dry when stored and kept in a dark, cool, well-ventilated place.

Cortland County is rapidly realizing the growing demand for seed potatoes and has organized an association to develop a seed market, with the following constitution and by-laws:

ARTICLE I

Name

The name of this Association shall be the Cortland County Potato Growers' Association.

ARTICLE II

Any potato grower may become a member of this association by first paying a membership fee of one dollar and adhering to the constitution and by-laws.

ARTICLE III

Object

1. To encourage the cooperation of potato growers for the protection and advancement to their common interests.
2. To grow varieties true to name.
3. To encourage the growing of only those varieties that are best adapted to our soil and trade.
4. To develop in those varieties the highest qualities for seed purposes.
5. To develop a seed potato market.

ARTICLE IV

Officers

1. The officers of this association shall consist of a President, Vice-President, Secretary-Treasurer, and Auditor.

2. These officers shall constitute the Board of Directors.
3. The Board of Directors may appoint a local inspector.

ARTICLE V

Seven members constitute a quorum.

ARTICLE VI

The annual meeting shall occur in January.

By-Laws

ARTICLE I

Duties of Officers

1. It shall be the duty of the President to preside at all regular and special meetings and shall call special meetings when requested to do so by the Board of Directors or three members.

2. The Vice-President shall perform the duties of the President in his absence or incapacity.

3. The Secretary-Treasurer shall keep the minutes of the Board of Directors and also the minutes of the meetings of the association, together with membership fees and such moneys as are due the association. He shall report delinquencies of such payments.

4. The Auditor shall go over the accounts of the Secretary-Treasurer twice each year and report at the next meeting.

5. The duty of the local inspector shall be to inspect operations of members of this association with special reference to treatment of seed, fertilization, cultivation, spraying, and proper grading for sale.

6. The Board of Directors may make contracts in advance when asked to do so by individual members.

7. It shall be obligatory on the part of all members to treat all seed before planting when such seed shows signs of the presence of diseases or scab.

8. It shall be obligatory on the part of members to spray with bordeaux mixture at such time and manner as local inspector deems necessary.

9. It shall be the duty of the Board of Directors to carry such advertisements as advisable to obtain new markets.

10. One and one-half per cent. of all sales shall go to the association to defray expenses.

11. The farm bureau agrees to assist in finding new markets.

12. Members may sell through local markets, if in their judgment and circumstances, it seems best.

13. These by-laws may be amended by two-thirds vote of the association.

14. It shall be obligatory on the part of members to assume a number, the same to be recorded with the Secretary-Treasurer and stamped on all bags of seed potatoes shipped.

We are giving below fourteen reasons why Cortland County potatoes are to be preferred for seed purposes:

1. Because Cortland County Potato Growers are organized
2. Because of the superior quality of the potatoes grown
3. Because they are true to name
4. Because the varieties grown are what the market demands
5. Because these potatoes are grown free from scab
6. Because potato fields are sprayed with bordeaux mixture
7. Because these potatoes are grown free from blight
8. Because we have an average rainfall of over forty inches
9. Because potatoes will be properly graded
10. Because the Potato Growers' Association is backed by a well organized farm bureau
11. Because the farm bureau agent inspects the work from planting to shipping
12. Because Cortland County is on a main line of the Delaware, Lackawanna and Western Railroad and Lehigh Valley Railroad, with low freight rates
13. Because our shipments will reach you quicker
14. Because all shipments are inspected

Your patronage is solicited. Quotations given on application.

POTATO MACHINERY

C. R. WHITE, IONIA, N. Y.

Potato Grower and Farmers' Institute Lecturer

In recent years potato machinery has become a very important factor in growing potatoes on a commercial scale. In every line of potato machinery there are many different makes, varying somewhat in the manner of operation. It is hardly necessary in this article to place very much importance on the machinery for plowing, fitting and tillage because the same implements used for other crops are well adapted to these purposes in potato growing. It is important, however, that the plow be of a type which sets the furrow on edge rather than turns it flat. The cutaway harrow is an essential tool not only for fitting the soil after plowing but for cutting the sod before turning.

POTATO PLANTERS

Of the special potato machinery the potato planter, of which there are two distinct types, fills a place of great importance.

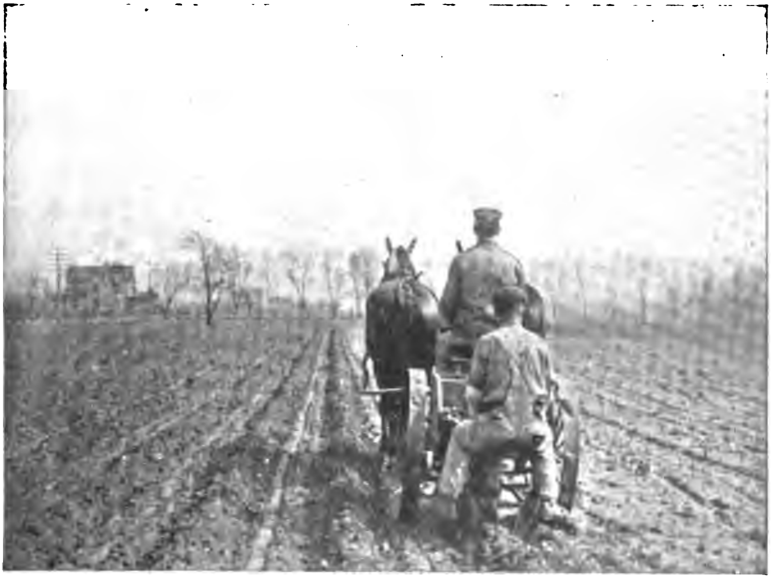


FIG. 28. —"TWO-MAN" POTATO PLANTER.

There are several makes of self-feeding machines which carry the seed from the hopper to the potato tube working automatically. The claims made in favor of this type of machine is that it requires but one man to operate and will work with seed more variable in size than will that which is known as the "two-man" machine. The latter, however, is more certain to drop the seed regular. With this type one man drives the team and the other watches the planting which is done either by a chain conveyor or revolving wheels through which the seed passes as it is carried before the operator. If there are vacant places the seed is supplied and if there is more than one piece it is removed from the conveyor.

With both machines the furrow is opened by a plow. Fertilizer may be delivered from a hopper and a second furrower mixes the fertilizer with the soil and cleans the furrow for the seed which is delivered at regular intervals, varying from ten to thirty inches as desired, planting at any depth and placing the seed in moist soil so that it does not come in contact with dry soil or the fertilizer. These machines are all very valuable and each has its loyal supporters among prominent growers.

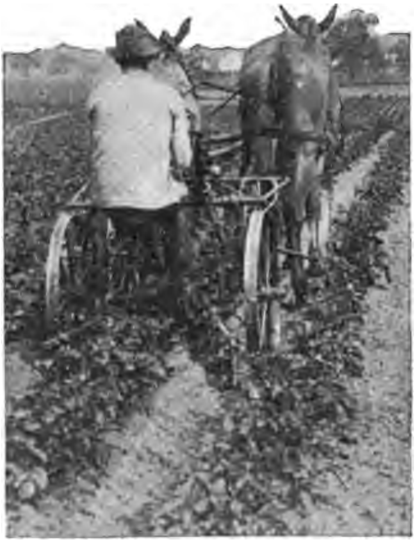


FIG. 29. — LOW WHEEL RIDING CULTIVATOR.

TILLAGE TOOLS

The tillage tools consist of the light smoothing harrow and weeder for surface cultivation and the riding and walking cultivator of which there are many makes

SPRAYING MACHINES

The potato spraying machinery which is becoming very important in combating insects and diseases consists of a number of makes of power sprayers carrying tanks which will hold from fifty to a hundred gallons and operated by the traction from the machine as it is drawn through the field. The pumps are high power and usually made of brass or brass lined so as not to easily corrode, and are capable of supplying the spray materials for four to six rows. They should carry a pressure of a hundred to a hundred and fifty pounds. The cost ranges from seventy-five to one hundred and twenty dollars.

In purchasing spraying machines there are several points which the grower should scrutinize very carefully. The tank should always be of wood because bordeaux mixture will soon eat out an iron tank, and it is better that all pipes and connections should be of brass. The working parts of the machine should be simple and substantial, it should be guaranteed to carry at least one hundred and fifty pounds of pressure and the nozzles should be set so that all parts of the vines will be thoroughly covered with a fine mist.

POTATO DIGGERS

Digging machinery consists of several styles of construction ranging from plows of different shapes which throw the hills of potatoes over onto rods or chains which separate the potatoes from the soil. Under reasonably favorable conditions such machines or plows are of assistance but are of little use on a large scale.

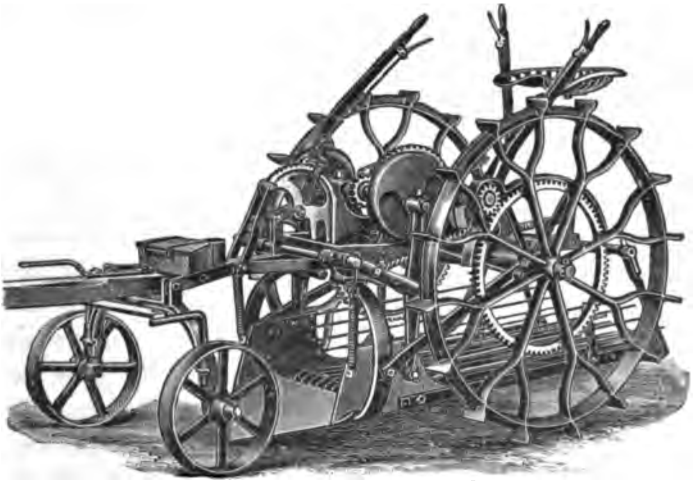


FIG. 30. — LOW-DOWN POTATO DIGGER.

There are two distinct types of machine diggers — the low-down or shaker digger and the elevator machine. Each type in turn is constructed in a number of variations by the numerous manufacturers. The low-down machine consists of an axle mounted on a pair of wheels, resembling mowing machine wheels, upon which is hung a frame supporting a flat pointed steel blade. This runs under the potatoes and as the potatoes and earth are forced over the blade they fall upon shakers, the most simple being similar to the tines of a fork and the motion up and down. In other machines the shaker is longer and gives a double shake both up and down and lengthwise. The latter have a much greater power of separation than the former and will handle a much larger amount of earth.

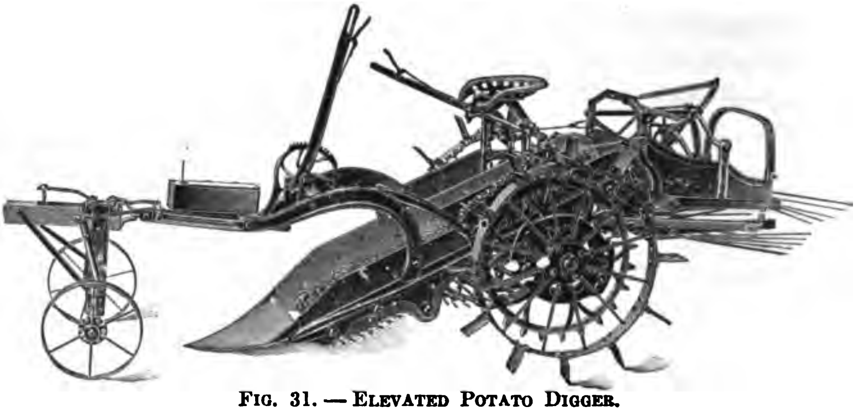


FIG. 31. — ELEVATED POTATO DIGGER.

The elevator digger is similar to the other except the wheels are usually larger, and as the earth passes over the blade or shovel, it is conveyed upwards and backwards by a chain or slat riddle which is shaken so the earth will crumble and run through while the potatoes are carried over. In this kind of digger the main difference is in the size and capacity of the machine, the method of delivery over the back, and the motion. In some cases the potatoes fall directly from the elevator to the ground, rubbish and all; while others have a rear shaker upon which everything which is carried over falls and is again sifted out, so that the potatoes are better separated and are delivered in a more narrow and compact row. Some machines have vine rods which push the loose vines and rubbish from the side of the row as it is delivered and still some run the potatoes into crates which are set off by hand; or if the crate is not used the potatoes are caught in an iron box, which is dumped at intervals, leaving the potatoes in piles.

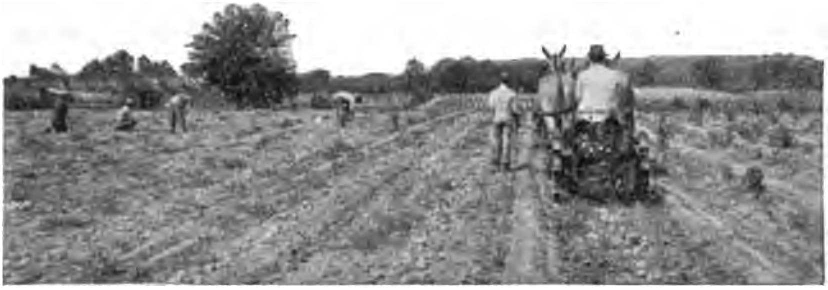


FIG. 32. — POTATO DIGGER IN ACTION.

With this wide range, growers have a large field to select from. The only caution which I could advise would be to see that the machines are made of good material, strong and durable, and be sure when buying to get a machine of sufficient capacity to do the work under adverse conditions. Many machines will do good work when potatoes are planted shallow or when the ground is dry that are utter failures with deep planted potatoes or when the ground is wet or grassy.

POTATO GRADERS

The other important machine which is to be considered is the potato grader, and with improved methods of marketing this machine is bound to become of great importance. There are three or four types: The slat machine, over which the tubers are run or pushed, the dirt and small potatoes dropping through between the slats; the barrel machine, which consists of a cylinder revolved by means of a crank, the outer covering of the cylinder being made of narrow slats separated so the dirt and small tubers will fall through. The cylinder is mounted on a slight incline, so that when it is revolved and the potatoes are shoveled into the upper end, the tubers which are too large to pass between the slats are worked along and drop out at the lower end. This machine is valuable where a person is so unfortunate as to have sprouted potatoes, as it will both break off the sprouts and separate them from the potatoes. A third style of grader, and the one which will have to be depended on when potatoes are to be graded into different sizes, is the ring grader. It consists of a chain belt, so made that almost the whole belt consists of round holes. The machines are made in several styles, the most simple with just one belt to take out the small tubers, the second has a second belt with larger holes onto which the tubers drop from the first and so on to any number, so the tubers may be graded into as many sizes as may be desired.

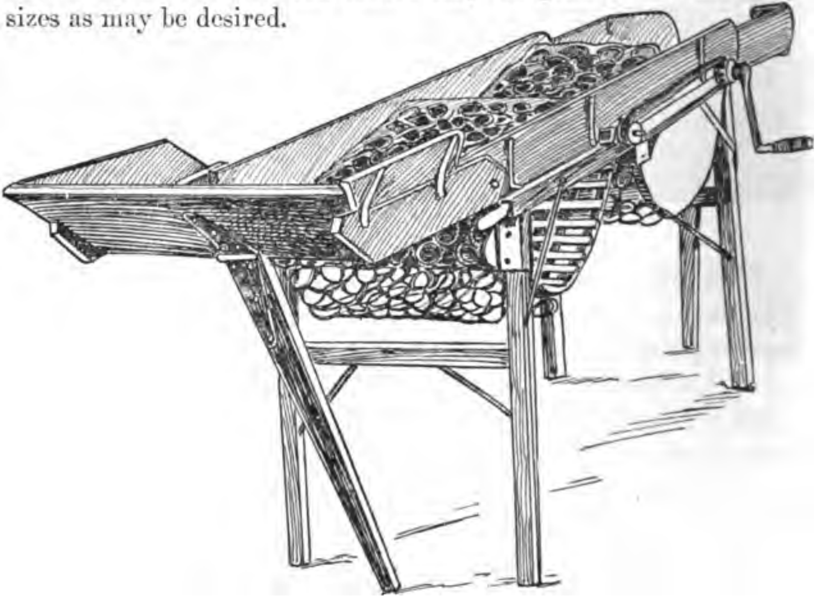


FIG. 33. — POTATO GRADER.

This kind of machine is destined to revolutionize potato marketing, for potatoes as well as apples will sooner or later be graded in size to suit the consumer.

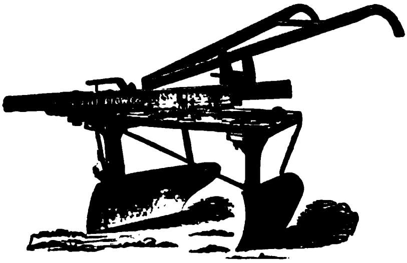


FIG. 34. — POTATO COVER AND HILLER.

The several illustrations in connection with this article are only designed to show different types of the several machines and not to illustrate any particular make of machinery.

POTATO GROWING ON LONG ISLAND

H. R. Talmage, Riverhead, N. Y.

President, Long Island Potato Exchange

For many years the Long Island potato has held a place all its own in the Greater New York market. This is due to two reasons, the first of which is that the Long Island potato always cooks dry and mealy and does not turn dark when cold, and the other reason is that the Long Island grower sorts his potatoes well, probably better than those from any other section coming to the same market. While the consumer has to pay from 25 to 33 per cent. more for these potatoes, they are probably just as economical for use in private families as any other, considering the better quality and freedom from waste.

Suffolk County, in which is located the most important producing section of Long Island, is fourth in number of acres in this state but considering the greater average yield per acre and the increased price per bushel, the total value of the crop is as great if not greater than any other county in the state.

The important potato producing section of Suffolk county is the extreme east end consisting of two narrow strips of fertile land between the Atlantic ocean and Long Island Sound and divided by Peconic Bay. Testimony that this is a prosperous territory is furnished in the fact that the two strongest rural savings banks in the state are located here, beside many commercial banks.

The soil is a sandy loam underlaid at a depth of two and a half or three feet with sand and gravel which gives perfect underdrainage. With this kind of soil and drainage it is possible to work the land very early in the spring and very soon after heavy rains. The land is level and free from stones and as we keep but very few cattle there are practically no fences, and it can readily be seen that we can use all the modern labor saving machinery to good advantage, where the size of the farms will warrant. But very few farms have an area of 100 acres under cultivation, by far the greater number running from 30 to 50 acres.

About one-half of the cultivated land on each farm is in potatoes each year and we believe that we have about reached the limit of production so far as acreage is concerned. A definite rotation is not followed by all our farmers, circumstances making changes each year, but in a general way potatoes follow cauliflower, brussels sprouts, lima beans, corn, etc. Potatoes will be planted two years and in some cases three or four in succession on the same land, every crop being followed by a cover crop where possible. Rye is the most commonly used cover crop and all things considered is the most valuable. Under special conditions crimson clover, oats, barley and wheat are used to some extent. It is on these cover crops that we depend for our humus. While humus greatly helps in our farming in many ways, the lack of it does not seriously affect the texture as it would a clay soil. City stable manure on account of its prohibitive cost is but little used.

A high-grade fertilizer, principally a 4–8–7 or 5–8–7, is used at the rate of 1,500 to 2,000 pounds per acre. The tendency is rather to increase the amount used, not because it has been demonstrated that the crop needs more but because the growers feel they would rather use a surplus, thereby increasing the fertility of the land rather than to chance the crop failing to reach a maximum yield because of lack of fertilization. All fertilizer is used in the drill.

On the larger farms the plowing is done with a gang plow with a rotary harrow attached performing the two operations at once, three or four horses being used. About all the planting is done with picker planters, the rows being 34 inches apart and the pieces dropped 13 inches apart for early varieties and 15 to 17 inches apart for the late varieties.

The Irish Cobbler is raised principally for early, the Enohla also being a very promising new variety of early potato. The Green Mountain, Gold Coin, Norcross, Mills Prize, World's Fair and potatoes of that type are raised exclusively for late crop. With our soil and climatic conditions the "blue sprout" potatoes such as the Sir Walter Raleigh do not do well as to yield and are of such inferior eating quality that we could sell them only at a discount.

We plant three to four inches deep, and harrow two or three times before the potatoes come up. As soon as the potatoes show so we can follow the rows we begin cultivating, going over them every week and following the cultivator with the weeder. We use the weeder until the potatoes are a foot high. We use the cultivator as long as we can get through without damaging the vines. We practice level culture and very little hand hoeing is required.

We plant as early as possible in the spring (often the latter part of March) in order that our crop may have the benefit of the cool weather and attain the greater part of their growth before the heat and drought of midsummer. In this respect we differ from the potato growers farther north who plant so as to make use of the rains and cool weather of the fall for their crop. About 10 per cent. of our crop is what might be termed "truck crop potatoes,"— that is early varieties dug as soon as they are large enough and before they ripen, and the land used for a second crop. These early potatoes are dug August first while the later crop is usually ready to begin harvesting about the middle of August or a little later.

Because our potatoes mature during the hot, dry weather of midsummer there is very rarely a year when there is any loss from late blight.

Usually our best market comes in after the New Jersey crop is nearly done, which is usually between September 1 and October 10, and before the Maine and up-state potatoes begin to come into the market freely. Previous to the year 1913, our farmers were inclined to sell only when the market was strong as they were always assured of a good market during the winter, from 20 to 25 per cent. of the crop going to market after December 1. Because of the removal of the duty on foreign potatoes we received for our 1913 crop a reduction of more than ten cents per bushel for our entire crop. As long as the present conditions exist we will market our crop in the early fall regardless of the condition of the market, coming into competition with the New Jersey and southern Pennsylvania crops. There will be a small reduction in the acreage this year because of the removal of the duty and in the years to come a much greater reduction if, by this removal, the potatoes are made cheaper to the consumer. A greater diversification of crops will result which in the end will probably be to our advantage.

During the past six years the crop has been very largely marketed through a growers organization, the Long Island Potato Exchange. This organization not only markets the potatoes but also buys the fertilizer, seed and other supplies for its members. We have been told repeatedly by the city wholesalers to whom we sell our potatoes that the growers could " thank their association " for receiving at least 10 cents per bushel more for their potatoes than they would have received if it were not for the exchange. As we ship from two to three million bushels a year, in six years this has amounted to the sum of — say $1,500,000 — to which can safely be added $500,000 saved to the farmers on their fertilizer, seed, feed, etc. Because of the advent of the exchange the speculators and local dealers have found their business much less profitable than formerly and are gradually dropping out one by one.

Had it not been for the assistance of the exchange to the growers many of them would have been hard pressed to pay their bills as we have had six unusually dry years with the natural result of a light crop.

With the constantly increasing value of land (from $150 to $300 per acre) and the steady increase in the cost of both man and horse labor and other things that enter into the cost of producing a crop, there can be no general reduction in the price our growers receive and still stay in business.

The following figures available from a large farm that annually raises 60 acres of potatoes shows the rather meager profits in the business. In the figures submitted there was no allowance made for a manager's salary, and several other crops grown showed no profit but were raised for the benefit of the land, also taking into consideration that on this large farm the efficiency of labor and machinery was greater than on smaller farms, it can readily be seen that the business can not stand any reduction in the gross returns.

	Yield per acre.	Cost per acre.	Rec'd per acre.	Net profit per acre.
1909	166	$59 00	$100 00	$41 00
1910	147	64 00	76 00	12 00
1911	139	67 00	107 00	40 00
1912	169	71 00	12[illegible] 00	51 00
1913	113	75 00	71 00	†4 00

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† Loss.

THE POTATO SITUATION IN WESTERN NEW YORK

C. R. White, Ionia, N. Y.
Potato Grower and Farmers' Institute Lecturer

A careful study of the potato industry in western New York with a view to observe not only the present condition but to review the past and look into the future, reveals the fact that if that large tract of country west of Syracuse in which the potato producing counties, Steuben, Monroe, Livingston, Ontario, Allegany (with a total area of 2,477,440 acres and total production of 80,463 bushels of potatoes) and several others of lesser production are to hold their prestige and increase their production to keep pace with the most progressive potato growing sections of the state and nation, some radical improvement must be made by the majority of the producers, not only in methods of growing the crop but in methods of soil improvement and maintenance. It does not require a very extensive survey to reveal the fact that the centers of heaviest production are constantly shifting. Many of the sections which gave heavy production twenty years ago have fallen to a very low production, while newer sections now hold the center of the stage and even some of these begin to show decline.

REASON FOR DECREASE IN PRODUCTION

A study as to the cause of the decline in production in these formerly high producing centers reveals the fact that too little attention was given to rotation or other methods of soil maintenance. These lands which are as a rule sandy or sandy loam are almost void of vegetable matter and on the rolling land the erosion has cut deeply into the slopes, the land in some few instances becoming worthless.

This tendency seems to prevail in the newer districts, and unless growers awaken to the fact that the amount of decaying vegetable matter in their soils will very largely determine the productivity of their lands, and take steps not only to maintain a large organic content but to increase it, there is prospect of a greater decline in yields.

IMPORTANCE OF SPRAYING FOR BLIGHT

Spraying potatoes for blight is only practiced by a small number of growers, and many who are attempting to take advantage of the benefits which may be derived, are not well enough enlightened as to the history of the blight and its development to combat it with a full degree of success. The watchwords of success "earliness and thoroughness" are not understood.

Through the whole section there are some up-to-date growers who are giving object lessons of great value. There are a few in some of the older producing sections who are maintaining high yields, but the process of deterioration has gone far enough so that it will take some time to bring the average production back in keeping with the natural production of the lands in western New York.

SEED SELECTION AND QUALITY

There is some improvement in seed selection. Farmers are showing a greater interest in better seed and this will doubtless exert considerable influence toward better production.

The quality of potatoes are of the best but the methods of marketing has not been of a character to produce the best results.

In traveling over the entire state, I have found that the eating quality of the potato of western New York is equal to those of any other section, even Long Island or the states of New Jersey or Maine, but the methods of grading and loading have not placed western New York potatoes in the position to which they are entitled. The sooner growers awaken to this fact and take steps to rectify the abuses, the better it will be for the industry.

Summarizing, then, the condition of the potato industry in western New York, it is safe to say that while there are many up-to-date growers, the rank and file are not attaining nearly the profitable results which are within their reach.

The older producing areas need to adopt radical methods of soil improvement by the liberal use of legumes and other plants as cover crops and in rotation. The new areas should likewise adapt similar methods or lower yields are sure to follow.

With the very high quality of potatoes produced in western New York, better marketing methods which are sure to come and the awakening of producers as to the possibilities which are slowly but surely approaching, we feel sure that the outlook of the potato industry in this section is very bright and that in the future as in the past western New York will be recognized as one of the important producing sections of the country.

POTATO GROWING IN NORTHERN NEW YORK

C. B. Tillson, Plattsburg, N. Y.

County Agriculturist, Clinton County, N. Y.

The potatoes grown in northern New York that reach the Boston, New York, Philadelphia and Baltimore markets are very largely grown in Clinton and Franklin counties. Although St. Lawrence, Jefferson and Essex counties produce considerable quantities of potatoes, the supply is not usually greater than the local demand. For this reason, this article will have to deal practically with the two counties, Franklin and Clinton.

The census figures of 1910 show that these two counties grew, in 1909, 15,946 acres of potatoes, yielding 2,758,802 bushels, making an average yield of 173 bushels per acre. When one stops to consider that the average yield in New York State is only 123 bushels per acre, it is readily seen that these two counties yield much larger than the average. This increased production is undoubtedly due to climatic and soil conditions rather than improved methods in tillage. Unlike some other portions of this state, potatoes have not become a special crop as yet in northern New York. They are grown, very largely, as a cash crop in connection with some other enterprise which is usually dairying. Very few farmers in this northern potato belt grow large acreage. Probably 90 per cent. of the potatoes grown here are grown on farms where less than ten acres are devoted to potatoes. In the sections of these two counties adapted to potatoes, practically every farmer grows from five hundred to fifteen hundred or two thousand bushels for sale. The farmer who plants more than ten acres is the exception rather than the average. To be sure, we have some farmers who are growing as high as five and eight thousand bushels of potatoes each year.

Most of the soil that is used for potatoes in these two counties is rather stony and the contour of the land is more or less irregular. For these reasons, modern potato machinery is not used to any great extent. I think the tendency is for the farmer, who can use machinery, to increase his acreage devoted to potatoes. In the St. Lawrence valley, I find many farmers are now using potato planters and diggers, whereas in the hilly sections these implements are not used to any extent.

Practically all the potatoes are grown in the regular crop rotation. It is seldom that potatoes occupy the land more than one year in this rotation. Quite often they are the first crop to follow the land clearing. When this is done, very little fertilizer is used for the first few crops. Although most of the farmers realize the importance of a clover crop to turn under previous to the potato crop, very few have this favorable condition for the reason that most of the rotations are too long. The land being so rough and stony, the farmers are inclined to leave it to grass just as long as it will produce a moderate crop; thus the sod that is turned under previous to the potato crop is usually very poor. Were conditions right so that the farmer could use a clover sod previous to the potato crop, undoubtedly the yield could be increased very materially. Most of the potatoes are planted very shallow — not more than two inches — and instead of being planted in drills, as they are in most potato sections, the most of them are planted in the check system, three feet each way. Probably one reason for this method is the ease with which they may be dug. The digging seems to determine the number of acres that each man can grow. It is a common practice to cover the potatoes once or twice after they come above the ground, especially if the field is infected with knot-grass or other weeds. In this way the farmers are able to keep the weeds in control without any hand labor. Many of the better farmers are beginning to use the two-horse cultivators. These are used during the forepart of the season; later on when the vines are well grown the one-horse cultivator is used.

It is a common practice not to plant the potatoes until quite late in the season. In Clinton County, the first week in June seems to be the preferable time. The reason for this delay is two-fold; the vines are less troubled with the common potato beetle and growth is prolonged to cooler months of the fall which insures a larger yield. Then too, when planted in this way, the crop fits in better with the corn crop that is used by the dairy. Very little blight occurs in this northern potato section. This is probably due to the cool air coming down from the mountain tops. Spraying for blight is not at all common.

Usually, there are not many of the potatoes marketed until they are all dug. The farmer being short of men, the usual custom is to dig the tubers and place them in the house cellars. Most of the potato buyers receive potatoes almost weekly during the entire winter. It is quite a common practice for the average farmer to sell a portion of his crop soon after digging and keep the balance to dispose of during the winter months. Most of the potatoes in those two counties are not bought by the bushel but rather so much for 62 pounds or 65 pounds as the case may be. This custom of taking 65 pounds for the common unit, I understand, was established a long time ago, when the potatoes were handled with ordinary shovels instead of potato forks. Because so much dirt was put in with the potatoes, the dealers demanded this extra five pounds.

Since the abolishing of the local starch factories, much more attention has been given to quality. The tubers that are now grown in this section are largely of the Green Mountain type. This variety seems to be a favorite in most of the eastern markets and it so happens that it is demanded by the Long Island and southern potato growers for seed purposes. Owing to the latitude and altitude of this section, it is very favorably located to produce high-class seed potatoes for southern potato growers.

Judging from the inquiries that have come from this section this year, the southern potato growers are beginning to realize the possibilities of this north country for their seed supply. We expect to be able to meet these demands through local seed potato growers associations. This new demand promises well to the potato industry of this north potato section.

The articles following on "The Standardization of Seed Potatoes" are reprinted from the Proceedings of the Normal Institute of Farmers' Institute Workers, held at Ithaca, November 10 to 12, 1915.

STANDARDIZATION OF SEED POTATOES

F. C. Stewart

Botanist, New York Agricultural Experiment Station, Geneva

The necessity of fixing some standards for seed potatoes is becoming very evident. Buyers of seed potatoes all over the country are complaining bitterly of the difficulty of obtaining good seed potatoes. The majority of the growers of seed potatoes appear to be utterly ignorant of what constitutes good seed, or else they are without conscientious scruples in the matter. In many cases the only difference between seed potatoes and table stock seems to be in the name and the price asked.

This condition of affairs must be remedied somehow. The present haphazard methods in the seed potato trade work to the disadvantage of nearly all parties concerned excepting, perhaps, a few unscrupulous dealers. Mr. W. A. Orton of the Bureau of Plant Industry has advocated, as a remedy, the organization of a system of inspection and certification of seed potatoes. In Wisconsin, Michigan, Vermont and Maine steps have already been taken in this direction. During the past two years there has been much discussion of the subject in this state. It is to be hoped that some definite action may be taken soon.

In the standardization of seed potatoes three chief things to be considered are: (1) The degree of varietal purity to be required; (2) the amount of the various diseases permissible and, (3) the methods of inspection and certification necessary to insure conformity to the standards adopted. We will briefly consider these in turn.

VARIETAL PURITY

Concerning the standard of varietal purity I will say that it seems to me it should vary somewhat according to circumstances. For example: A mixture of Rural New Yorker No. 2 and Sir Walter Raleigh is difficult to detect; moreover, these two varieties are so similar that it does not matter greatly if they are mixed. On the other hand, there is no excuse for the mixture of a late with an early variety, as, for example, Sir Walter Raleigh or Carman No. 3, with Irish Cobbler — a very frequent combination which is disastrous to the grower of early potatoes.

In other words, a mixture of closely related varieties belonging to the same group is permissible within rather wide limits, but a mixture of varieties belonging to different groups should be permitted only within very narrow limits. No field showing over 15 per cent of varietal mixtures should be accepted for seed even if the owner is willing to rogue it. Fields showing less than 15 per cent mixture of varieties of different groups may be accepted if thoroughly rogued.

DISEASES

The extent to which potatoes may be diseased and yet qualify for seed depends, of course, on the nature of the disease. There must be different standards for different diseases.

The wart, being a dangerous disease not yet established in the United States, should be carefully guarded against. Seed potatoes should be absolutely free from wart.

Just what may be expected of powdery scab is not clear at present. Recent observations indicate that it may be unimportant in the United States except, possibly, in the extreme northern part. However, for the present, it seems best to require that seed potatoes be absolutely free from powdery scab.

Of the common scab it may be said that a small amount of it on seed potatoes is not seriously objectionable, because the germs of the disease are readily destroyed by the corrosive sublimate treatment, which should generally be given to seed potatoes anyway. Of course, no very scabby tubers should be included. I agree with Mr. Sands that a tolerance of 10 per cent slight scab infection should be allowed, provided that of this amount the infections on any one tuber do not cover more than 10 per cent of the surface thereof.

The same may be said of Rhizoctonia as of common scab.

Even a severe attack of late blight need not, necessarily, disqualify a field of potatoes for seed purposes. Frequently, little or no rot follows severe attacks of blight. A severe attack of rot, on the other hand, may warrant disqualification. Moreover, when conditions are favorable for rot, shipment from blighted fields for seed purposes should not be permitted for at least a month after digging. The object of this requirement is to give affected tubers a chance to show themselves so that they may be sorted out. I think that the claim, sometimes made by southern growers, that seed from blighted fields is especially liable to rot after planting, and gives poor stands, is not well founded. Rotting of the seed pieces after planting is usually due to other causes. With reasonable care in sorting the seed at planting time very few blighted tubers need be planted. Neither is there any great danger of starting blight through the use of seed from blighted fields. While outbreaks of blight have sometimes been traced to the use of blighted seed, such cases are rare, and experience goes to show that fields planted with blight-free seed usually blight as early and as severely as those planted with seed from unblighted fields. Blight-free seed has not the advantages often claimed for it; yet potatoes from fields showing much rot can hardly qualify as first-class seed.

Mosaic is a new disease which promises to become a very important factor in the seed potato business in this state. It is transmitted through the seed, yet shows no evidence of its presence in the tubers. There is no means by which affected tubers may be detected. Badly diseased plants are easily detected by their wrinkled, curled foliage and small size; but in mild cases it is often difficult to distinguish diseased plants from healthy ones. This fact makes inspection for mosaic difficult and uncertain. As yet it is uncertain how strict it will be necessary to be in regard to mosaic. With some varieties it is very destructive, and recent experiments at the Geneva Station indicate that, under some conditions at least, tubers from slightly affected plants may produce plants which are entirely worthless. Thus, according to present indications, fields showing much mosaic are to be avoided as a source of seed. However, we are confronted by the fact that mosaic is widespread throughout Maine and northern New York; and, if we are to have enough seed potatoes to supply the demand, we shall be obliged to pass fields containing some mosaic. In view of this, and the difficulty of detecting mild cases of the disease, it is suggested that, for the present, the limit on the amount of mosaic permissible be placed at 5 per cent. No field showing over 15 per cent of mosaic should be passed even though the owner is willing to rogue it, and fields containing a smaller amount than 15 per cent should be rogued down to 5 per cent or less before being accepted.

Leaf roll and curly dwarf are transmitted through the seed and, as with mosaic, affected tubers can not be detected; in growing plants these diseases may be detected quite readily. Fields showing more than 10 per cent of either of these diseases at the beginning should be disqualified for seed. Fields showing less than 10 per cent may be accepted after thorough roguing.

The same rule should apply to fields containing many small, weak plants unaffected by any recognizable disease. The presence of a high percentage of small, weak plants is evidence that the strain is degenerating, and it is unsafe to use for seed even tubers from the large plants in such fields.

Similar limits should be placed upon blackleg. The presence of over 10 per cent of blackleg should disqualify a field. If there is less than 10 per cent the field may be accepted after thorough roguing. It should be borne in mind that the corrosive sublimate treatment of seed tubers is a preventive of blackleg.

The wilt diseases (*Fusarium* and *Verticillium*) and the stem-end browning of tubers require stricter treatment. These diseases are especially dangerous because they are transmitted through the seed, and there is no known method of efficient preventive seed treatment or of eradicating them when once established. Fields showing, previous to roguing, over 2 per cent of plants affected with wilt should be disqualified; and not to exceed 1 per cent of tubers affected with distinct stem-end browning should be permitted at the final inspection.

OTHER CONSIDERATIONS

In addition to the above there should be some regulation regarding the size or weight of tubers. For late varieties I should recommend two to twelve ounces, and for early varieties two to ten ounces as being the proper limits of weight. Also, it should be stipulated that, in fields acceptable for seed, good cultural conditions shall prevail and that the yield shall be a satisfactory one for the variety.

The discussions at the several conferences which have been held over this matter show that it will be very difficult to reach close agreement on seed potato standards until after there has been more experience with the actual work of inspection and certification.

My view is that the standard should not be placed high at first so that it may be gradually raised as our knowledge of the subject grows.

SUMMARY OF STANDARDS

Briefly summarized, the following standards are proposed for New York seed potatoes:

1. Freedom from evident varietal mixture.
2. Conformity to type of variety as regards vine and tuber characters.
3. Freedom from wart and powdery scab.
4. Practical freedom from leaf roll, curly dwarf, blackleg and weak hills.
5. A maximum of 5 per cent of mosaic.
6. Freedom from serious infection with other diseases.
7. Good cultural methods.
8. Tubers to weigh between 2 and 12 ounces for late varieties and between 2 and 10 ounces for early varieties.
9. Satisfactory yield for the variety.

METHODS OF INSPECTION AND CERTIFICATION

While the difficulty of deciding upon standards is considerable, that of working out methods of inspection and certification is greater.

About two years ago when this matter first came up for serious consideration in New York it was thought that the inspection and certification should be done by the state through its Department of Agriculture. Accordingly, the department detailed Mr. H. C. Sands to investigate and draw up the necessary standards and rules and regulations to govern it. Mr. Sands made a thorough study of the problem and outlined a very complete method of procedure. It being found that an act of the legislature was required to give the commissioner of agriculture the necessary authority to carry out the proposed inspection and certification, a bill providing for the state inspection and certification of seed potatoes was introduced into the legislature during the closing days of its last session. This bill failed of passage.

Lately the view has prevailed that it would be unwise to enact such a law until after some experience has been gained through an unofficial system of inspection and certification. With experience as a guide it will be possible, when a law is finally enacted, to avoid some mistakes which are sure to be made if a state inspection and certification should be established at once.

At its last annual meeting the New York State Potato Association took up the matter and referred it to a committee of three consisting of Mr. F. A. Sirrine, Mr. C. B. Tillson and the writer. This committee has not yet completed its labors and is not prepared to make a full report, but will probably recommend a method of procedure essentially as follows: The New York State Potato Association, through its president and secretary, will issue certificates of inspection upon the recommendation of official inspectors of the association. The official inspectors are to be appointed by the president of the association upon the recommendation of the Department of Plant Pathology of the State College of Agriculture. The salaries and expenses of inspectors are to be paid by the association. A tax sufficient to cover the expense of inspection and certification will be levied upon the growers and dealers to whom certificates are issued. The time and manner of inspection are to be prescribed by the association through its Committee on Inspection and Certification. It will be necessary to make at least two field inspections — one at blooming time, the other near the close of the season. A third inspection, at digging time or after the tubers have been placed in storage, will be necessary in some cases.

Each certificate issued should bear a serial number, and all the potatoes shipped under a certificate should be bagged at the car in new bags holding 165 pounds. Each bag should have attached to it, when filled, a shipping tag bearing the certificate number, the name of the variety and the words, "Certified Seed: New York State Potato Association." On the reverse side of the tag should appear the name of the local association or dealer shipping the seed; and the grower's name may also appear if he desires it. Certificates may be revoked by the association at its discretion. A grower or dealer making improper use of his certificate should be promptly punished by the revocation of his certificate for the year.

STANDARDIZATION OF SEED POTATOES

E. H. Forristall, Cortland, N. Y.

Farm Bureau Manager of Cortland County

What I have to say will deal with methods and distances apart of planting potatoes to insure desirable size potatoes.

I call your attention especially to this board which represents the size of potatoes as agreed upon for standards by the Cortland County Potato Growers' Association. These meshes have a constant variation in size from the largest to the smallest, and there are six meshes in all. The Cortland County Potato Growers' Association adopted, as a standard, meshes 2, 3 and 4 as representing the sizes of potatoes they would sell for seed, thereby establishing a standard for Cortland County potatoes.

It goes without saying that they must be free from blemishes, irregularities and diseases. I call your attention to these potatoes that have been graded according to this standard. Note the uniformity of these three lots graded through meshes 2, 3 and 4. I might add that these potatoes are known in Cortland County as the Norcross Seedling, a white sprout potato of remarkably good quality and noted as being a heavy yielder.

The farmer who buys potatoes of these sizes will not have to invest in a lot of potatoes varying in size from the very large to the very small. He also is insured of a better crop than when he invests in seed of all sizes.

Let us look at this chart showing results of grading in tuber unit work on the farm of Frank Carter:

VARIETY	Yield per acre	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Total seed	Total rejected
		Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Norcross Seedlings.....	363 bu.	9	19	52	16	3	1	87	13
Norcross Seedlings.....	469 bu.	13	14	28	22	2	3	64	36
Norcross Seedlings.....	272 bu.	4	34	24	30	4	....	88	12
Norcross Seedlings*...	302 bu.	....	....	....	....	....	....	90	10

*Result of seed purchased from Mr. Carter by H. R. Talmage, Riverhead, L. I., and planted on Long Island.

You will note that the number of units averaging 363 bushels per acre gave a total of 87 per cent seed stock. Also, that those units averaging 469 bushels per acre run 64 per cent. Those averaging 272 bushels per acre gave 88 per cent. Potatoes similar to those used in tuber unit work were sent to Mr. H. R. Talmage, of Riverhead, L. I., and planted by Mr. Talmage on his farm. Of the 28 lots tested out by Mr. Talmage, this particular variety from Cortland County gave a yield of 302 bushels with 90 per cent seed stock and 10 per cent rejected, according to his figures.

This chart shows us that the extra heavy yield of 469 bushels over the other two units resulted in a large percentage of potatoes too large to grade, also more of the very smallest size. These potatoes were all planted in rows 36 inches apart, and 16 inches apart in the row. Had these extra heavy yielders been planted closer together, it is possible that we could have had a larger percentage of seed which would result in large money returns per acre.

I wish to call your attention to this chart showing how close planting increases the percentage of desirable seed stock:

Area per hill	Yield per acre	Oversize. Per cent	No. 1. Per cent	No. 2. Per cent	No. 3. Per cent	No. 4. Per cent	No. 5. Per cent	No. 6. Per cent	Total seed. Per cent	Total rejected. Per cent	Value of seed at 50 cents per bushel	Value of total yield at 25 cents per bushel	Gain
3.75 ft......	310 bu.	....	4.43	21.29	41	21.16	6.71	5	83.42	16.28	$129 30	$77 50	$51 80
7.44 ft......	281 bu.	27	11.33	22.33	21.33	12.67	5.17	.17	56	44	80 68	70 25	10 43
Difference...	29 bu.	....	......	......	......	......	......	......	27.42	......	$48 62	$7 25	......

The first line gives averages taken from grading on seven farms. Note the yield per acre of 310 bushels — total seed 83.42 bushels. The value of that seed at 50 cents per bushel, or the price of seed stock for 1914, gives a value of $129.30 per acre. If this entire crop had been sold at the cars, at the ruling price of 25 cents per bushel, it would have returned to the farmer $77.50 per acre. This farmer has gained $51.80 by growing seed potatoes at 50 cents per bushel and grading the same according to this standard. Besides this, he has practically 50 bushels of large and small potatoes to be utilized on the farm as food for his stock.

Let us see what six other farmers received when following the old custom of planting their potatoes far apart, allowing 7.44 feet per hill. Their average yield per acre was 281 bushels. Planting far apart has given them an average of 27 per cent oversized potatoes, undesirable for table use or seed stock. They are the kind of potatoes that we ordinarily get when we order mashed potatoes in the restaurant. These six men have an average of 56 per cent seed stock, which, at 50 cents per bushel, would net them $80.68. The entire crop marketed at the car (this includes the very smallest as well as the oversized potatoes) would bring $70.25. These men by grading their potatoes and selling according to this standard would have gained $10.43. However, from my point of view, this seed would have been very undesirable because it had not been properly grown. In addition to the $10.43 gained, they would also have had 123 bushel of potatoes to feed to the stock.

Closer planting, then, not only gives us larger yields per acre, but stock that is more desirable either for table use or for seed. It also gives a larger money return for labor. We find that by closer planting of potatoes in Cortland County the farmer can decrease the area planted by 38 per cent, or a little more than one-third, and receive the same for his potatoes as he formerly did when he planted by the old method. This is a saving of labor, fertilizer and ground that can be employed to grow other crops. In other words, it is a better utilization of the soil.

This third chart shows that potatoes will ordinarily grade the same when planted the same distances apart on practically the same kind of soil, whether yielding heavy or light.

RESULTS OF TWO YEARS' GRADING OF POTATOES ON FARM OF M. F. WEBB

Year	VARIETY	Yield per acre	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Total seed	Total rejected
			Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*		
1915	Green Mountain...	110 bu.	....	10	27	45	10	8	82	18
1914	Green Mountain...	250 bu.	4	12	33	37	6	8	82	18

In a year like 1914, when we had a crop of potatoes in the United States equivalent to 114 per cent, and these potatoes were allowed to go onto the markets unstandardized, the result was that the price per bushel was below what they had actually cost the farmer to raise, many potatoes being so large that they were undesirable. This caused the city dealers a great deal of expense in grading, if they were to get the most returns. This expense means storage, rent, insurance, and labor of men doing the work of getting rid of the culls at a low price. The alternative is to sell these potatoes to the poorer trade, taking out the commission and returning the balance, if any, to the farmer.

If every farmer in the United States had graded his potatoes in 1914 according to this standard, practically 82 per cent of our entire supply would have been put on the market. The ten-year average is 74.6 per cent. As this year's yield is estimated at 74.2 per cent, you see that we are practically normal, and potatoes are selling for from 50 to 85 cents per bushel. An 82 per cent crop could be marketed at a price that would allow the farmers fair remuneration for raising potatoes.

Let us consider potatoes that grade through meshes 3 and 4 that conform to this standard for smoothness, etc. They will waste only about 7 per cent in cooking, while large, irregular potatoes will waste from 17 to 30 per cent.

In conclusion:

1. Selected seed gives larger yields of desirable sized potatoes.
2. Planting far apart increases the size of the potato and lowers the value of the crop.
3. Quality is affected by method of planting.
4. The general public should be educated to the value of a reasonable sized potato, smooth and free from blemishes.
5. All large and irregular, as well as small potatoes, should be marketed through the stock on the farm.
6. Undesirable potatoes should never be allowed to come in competition with standardized stock.

STANDARDIZATION OF SEED POTATOES

C. B. Tillson, Plattsburg, N. Y.

Farm Bureau Manager of Clinton County

The standardization of potatoes with which the speaker is familiar has reference to seed potatoes rather than to table stock. In fact, so far as I have been able to learn, outside of a small section of Long Island very little work has been done in this state in the way of standardization of table potatoes. I suppose this is due quite largely to the fact that the public is not as yet fully aware of the advantages that would be derived from a standardized table potato.

One must admit that it costs a little more to make a standardized product of any commodity than it does to produce the ordinary stock run. This means that the producer will be obliged to demand a little higher price for standardized potatoes than the ordinary field run. Until the consumers begin to see the advantages of paying this extra price I suspect that the practice will not become general. Of course, this same thing holds good with the seed potatoes, except that the buyers of seed potatoes already realize the importance of the standardized seed potato and are willing to pay the extra expense in producing it. In fact, a great many of the large buyers of seed potatoes make price only secondary, provided they can get a standardized potato of the right quality. They are willing to pay well for it. This makes the standardization of seed potatoes a very easy matter.

In the northern part of the state we have not advanced the work of standardization of potatoes to cover all the different phases of it that we expect to as the work grows. The principal thing that has been emphasized thus far is to produce from high producing stock potatoes which are practically free from disease. After we have succeeded in obtaining stock that will meet with the approval of the most exacting along this line, then we shall attempt to grade the potatoes according to size, and standardize each grade. I do not wish to be misunderstood by saying that as yet we have paid no attention to size. This is not true. We have from the start produced medium-sized uniform potatoes, but have not separated them into different grades according to size.

By fairly close planting we have found it very easy to avoid the overgrown potato. On some of the poorer potato soils we find it necessary to plant farther apart in order to insure sufficient size.

The maximum amount of disease that should be tolerated in certified seed potatoes is a matter that has not been definitely decided upon in this state. At the present time definite plans are being made for the establishment of the standard to be used in the certification work. In my judgment, this is one of the most important things that the potato growers of this state have undertaken. After we once have this standard worked out and adopted, it will be possible to turn out a uniform article from the different potato-growing sections of the state.

Personally, I am desirous of a high standard. Still, I think it is of the utmost importance that the standard for certification be low enough at the start so that the best potato growers will be able to qualify within a comparatively short time — say one or two years. I think I can see where there would be great danger of having the standard so high that it would be possible for a farmer only here and there to produce seed potatoes that would be accepted as certified. From year to year it will be possible, undoubtedly, to raise the standard by decreasing the maximum amount of minor potato diseases that will be tolerated.

Although a few states of the more important potato-growing sections have adopted plans for certification work, it seems best at this time for the State Potato Growers' Association to undertake this work until we know definitely the standard that should be set and maintained. After this standard is once recognized to be the ideal standard, then the state department of agriculture can be of the utmost assistance in carrying it out. I think by working through the State Potato Association we will be able to relieve the state department of much experimental work in arriving at the proper standard.

There is no phase of the potato-growing industry that looks more favorable at the present time than the production of standardized seed. The same thing undoubtedly will hold true with table stock just as soon as both the producer and consumer realize the importance of putting upon the market a standardized article.

STANDARDIZATION OF SEED POTATOES

ORRIN F. ROSS, Utica, N. Y.

Farm Bureau Manager of Oneida County

Mature potatoes, free from blemish, of ideal shape and size, at a low market price, are desired by the consumer. The grower first of all wants a large yield per acre and the highest market price he can get per bushel. These two desires are wide apart, and can only be brought closer together by the consumer paying the full price for the extra effort and the probable reduced yield to the grower. In other words, I believe standardization is but a cold business proposition, where the buyer can secure any grade he desires whenever he is ready to pay for effort, time and material used to produce the desired grade.

In the United States most of the potatoes are sold for table stock without grade or restriction. The most desirable size for this trade is between five and ten ounces, and some markets will pay a small premium for such stock, especially large hotels and restaurants. There is a still smaller demand for tubers weighing over ten ounces, used for potato products by manufacturers. I am also informed that some sections and restaurants want a grade smaller than six ounces. On most markets the large and the small patotoes can be mixed and sold for a price slightly under the regular grade offered. Where size alone is the main consideration all parties can be supplied at a small increase in cost by passing the "field-run" over a standard grader adjusted to make the three grades desired at one operation. However, if the other desires of the consumer are met, the cost will be greater in proportion to the demands, because to secure these conditions something must be supplied that machines do not possess.

The size, other things being equal, is influenced in the field by the distance apart in the row, but what this distance shall be depends upon many factors; such as, season, climate, soil, fertility, variety and set, or the number of tubers per hill. The important factors in growing the tubers to a large average size are: a long and favorable growing season, right climate, with good potato soil, plenty of plant food, and a large variety having few tubers per plant. With these conditions present the plants should be closer in the row than when these factors are absent, in order to secure the greater percentage of tubers of medium weight. It has been my experience with growers that they desire large tubers which usually yield heavily, are easily harvested, and have brought regular market prices when delivered at the shipping point. If the above considerations are correct it would seem that the practical way to meet the standards for table stock is to use a mechanical grader for size, and secure the type and quality by sorting and selecting the seed stock used to produce the crop.

The buyer or grower of seed stock should have in mind qualities other than appearance. Every grower should desire first of all a large yield per acre, because this usually means a small cost per bushel for production, and his profit is the net margin between his cost and sale price, times the quantity. He should have the same sum left for profit if he cleared 10 cents per bushel on a 400-bushel per acre crop that he would have if he cleared 20 cents per bushel on a 200-bushel crop, but in practice he usually nets more per bushel on the 400-bushel crop and makes four times the profit on the 400-bushel crop over the 200-bushel one. Therefore it would seem that the first and most important factor to consider is hereditary characteristics for a large production. To obtain a large production because of climate, soil, fertilizer or a favorable season, does not add to the value of the tuber for seed purposes. Any one who has done selection work and isolated pure lines for a number of years, has learned that different lines will vary more than 100 per cent in yield, owing to seasonal and fertility conditions; but that, side by side, one line will more than double the yield of another year after year no matter what the conditions. This must be due to the inherent characters possessed. During the past year I have helped harvest lines in their second and third year of development, which showed within an extreme range of four tubers difference in counting 100 hills; also that the shape was as uniform as the set.

To give methods or results of our selection work would make this article too long, but it is safe to say that any variety or group contains enough variations so widely different that a grower can secure any desirable character by isolating a hill showing these, until enough seed is secured to plant his entire field. Many hills should be used, and the least desirable lines discarded each of the three years. My experience during the past three years with many fields leads me to believe that the quickest, surest and most practical means of securing a potato that will give large production, of ideal shape, and free from inherent disease, is by selection for these characteristics, and developing this line pure until all the field can be planted from it. Then practice a method of elimination of all weakness or disease that may creep in. I should suggest that each year the home seed be dug by hand and every undesirable hill discarded. To do this the plants should not be close enough so that the hills cannot be separated when dug. If the seed trade wants and will pay extra for potatoes to run under ten ounces, then they can be crowded, and a type may be selected having a large set. Growers might profitably use planter size taken out with a grader, providing the parent hills are thoroughly rogued each year. The practice of using small potatoes from the bin year after year cannot be too severely condemned, because the greater number of these small tubers are produced by the poor, weak and diseased hills.

THE IMPROVEMENT OF BLISS TRIUMPH POTATOES *

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Pathologist, Bureau of Plant Industry

On the island of Bermuda, the growers of potatoes have suffered such losses from their inability to obtain vigorous seed that the government of the island found it necessary to lend assistance. The cooperation of the New York State Department of Agriculture was requested and the writer was assigned in 1915 to the task of assisting the Bermuda Government, which was represented by Mr. E. J. Wortley, their director of agriculture. The following represents a summary of the operations extending over three years. The accompanying photographs were taken either by the writer or by Mr. Wortley. For convenience, the subject-matter will be presented in sequence as it developed during this period, and subdivided again so that each year contains its own activities and conclusions therefor.

POTATO GROWING IN BERMUDA

Bermuda plants three crops of potatoes per annum. Part of this seed is grown in Long Island, part in Maine, and part in Nova Scotia and New Brunswick.

Only two varieties can be grown in Bermuda, namely, Garnet Chili and Bliss Triumph. The Garnet Chili is obtained from Nova Scotia and New Brunswick, and in Bermuda are planted the last of January from stock grown the previous summer in Canada. Bliss Triumph follows during the summer months and is planted from stock grown in Maine the previous summer; while, beginning with late September, the third crop is planted from Bliss Triumph grown the same summer on Long Island. It is obvious that the stock of Bliss grown in Maine the same season could not be harvested and shipped to Bermuda in time for the September planting, hence the reason for Long Island as a link in the chain. It is in regard to the Long Island developments that particular attention is herein devoted.

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* **This article is included in addition to those in Bulletin 77.**

CONDITIONS ON LONG ISLAND AND IN MAINE

In taking up this problem it was immediately ascertained that the Long Island farmers were producing almost as bad crops as were those of Bermuda. Since Long Island could not produce its own seed, even for a second season, it was necessary to get at the matter from the source — to go to Maine and induce the growers there to raise better seed for the Long Island producers. Accordingly, Mr. E. J. Wortley went there and, through the courtesy of Dr. W. A. Orton of the United States Department of Agriculture, was able to secure the assistance of Dr. I. E. Melhus in the selection of the best field of Bliss Triumph potatoes to be had during the 1914 season.

In the meantime it is necessary to state that on Long Island the Bliss are raised by about a dozen contractors who purchase it in Maine and put it out among Long Island growers by contract. They guarantee to take back the entire yield. This is sorted and the best packed for export to Bermuda according to orders received.

These contractors were acquainted with the plan of operation that Mr. Wortley and myself proposed to follow and were notified in the spring of 1915 that the field in Maine above referred to would be available at twenty-five cents per bushel above the market price. Because of this advance only a few availed themselves of this opportunity and purchased the difference on the open market. To them, one potato was as good as another, so that the price decided the purchase. Such a thing as varying degrees of yielding ability by the different lots was unheard of and doubted.

At the same time a very large grower — Mr. King, of Caribou, Maine — was induced to purchase some of this field. After due explanation of the purposes, it was arranged that he should systematically select the strain, while the contractors at New York would be persuaded to secure it and put it out in preference to stock that was without pedigree.

The Bermuda Government passed various regulations, not necessary to repeat here, but to the effect that no potatoes could be exported to Bermuda unless a field inspection in the country of production had been performed by duly authorized agents, and that only such potatoes grown on fields passed by these agents were to be offered for transport to the island.

FIRST INSPECTION SEASON

The season of 1915 witnessed the first enforcement of these regulations in Long Island. The results were interesting, since seed from the best commercial field in Maine and seed purchased at random on the open market was planted. The condition of the crop this summer was very miserable. The yield varied from twenty-five to one hundred bushels to the acre. The inspectors were forced to be very lenient, otherwise sufficient potatoes for planting would be unavailable, and the best that could be done was to select the better fields from what otherwise was a 75-per-cent failure. For convenience, the lots were grouped as follows:

1. *Passed*—those fields from which shipments could be made without more than the removal of culls.

2. *Screened*—those which, in addition to removing culls, must be run over a $1\frac{7}{8}$-inch screen.*

3. *Condemned*—those totally unfit for consideration.

The foliage varied in all degrees from that seen in Fig. 35 to that in Fig. 36, in which a green stalk was not to be seen. In the latter case, on digging the hill a clue as to the original vitality was to be had in the spread of tubers exhibited. It was noted that in weak and diseased plants, all phases occurred from practically no stolons, where the tubers were set tight to the main stem (Fig. 38), to those in which there was considerable stolon spread among the usually small tubers. These widespread root systems indicated strength and probably would have developed a good yield had soil conditions been favorable for growth. This fact was given consideration in passing judgment, especially when the foliage was dried down.

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* It was noted that mosaic, leaf roll, curly dwarf, and plants with inherent lack of vigor ran to small sizes and hence the majority would be removed by screening.

Without details, the results of this inspection were as follows:

Fields inspected	88*
Fields passed	49
Fields to be screened	12
Fields condemned	27

Here it is interesting to note that out of twenty-four farms growing stock secured from the field recommended in Maine, but three were condemned. These three seem to have failed, due more to a combination of poor soil, drought, and a poor farmer, than directly to the seed. Even here, the spread of the tubers in the hill and their large set indicated that they had started prosperously.

Out of sixty-four fields planted from stock purchased at random, twenty-four were condemned, a few passed, and the remainder screened, so that at the outset the Maine field established its individuality and was our strongest argument for the purchase of its progeny the following season. This was later done by all the contractors with one or two exceptions, which are discussed later.

Mosaic occurred in all sizes, but for convenience was grouped by us into three sizes as noted in Fig. 37. Types of leaf roll and inherent lack of vigor occurred about as in Fig. 38, and in this cut attention is called to the set of the tubers close to the main stem — an indication that something is wrong.

Fig. 39 is about the average of the fields grown from the Maine field recommended, while Fig. 40 is about the average of fields grown from stock selected at random on the market.

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* For detailed reports concerning the findings on each farm, the respective yearly reports to the Bureau of Plant Industry may be consulted.

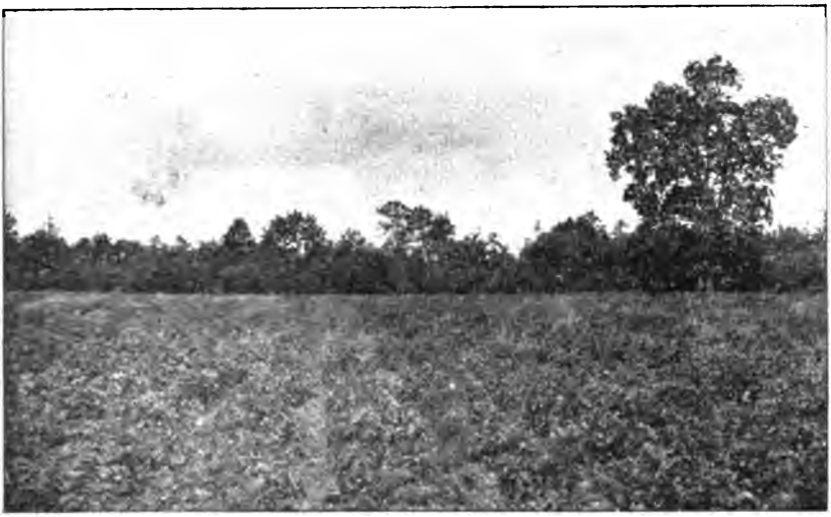

FIG. 35.— THE BEST FIELD OBSERVED IN THE 1915 INSPECTION

Seed from the Maine field recommended and selected by Dr. I. E. Melhus and Mr. E. J. Wortley. This field was not rogued in Maine.

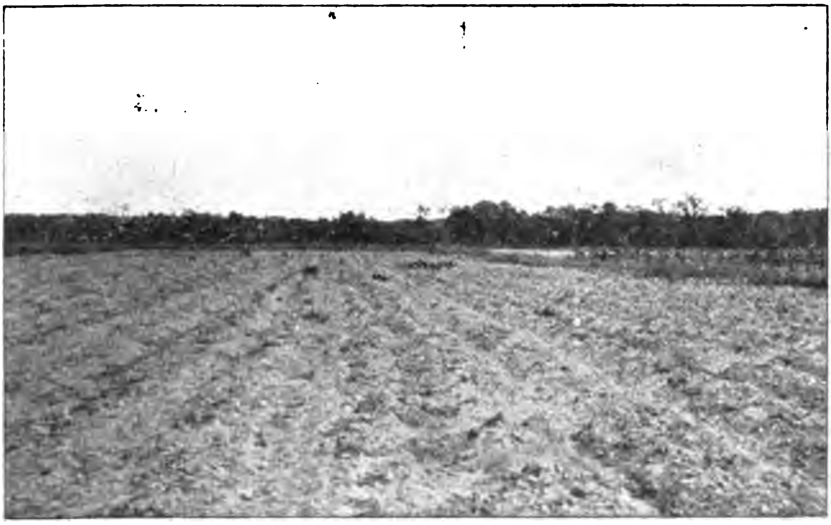

FIG. 36.— THE POOREST FIELD OBSERVED IN THE 1915 INSPECTION

Seed purchased on the open market at random. An adverse soil condition coupled with especially weak seed caused this result.

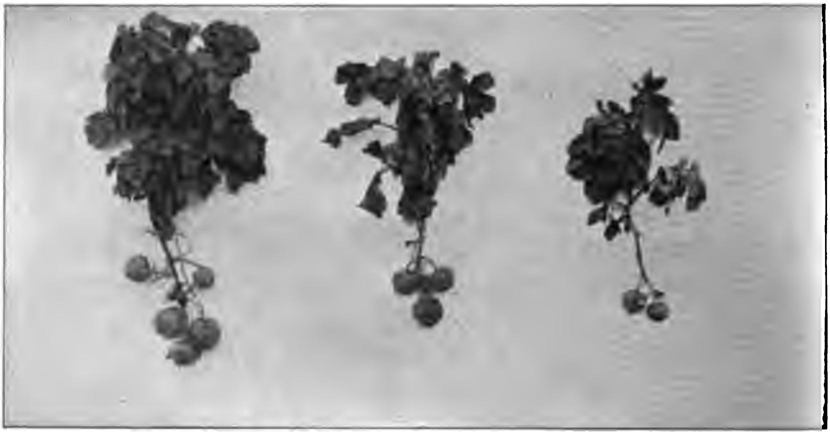

Fig. 37.— Three Sizes of Mosaic Showing Comparative Yields

The crinkly leaves with blotched yellow areas are typical associations.

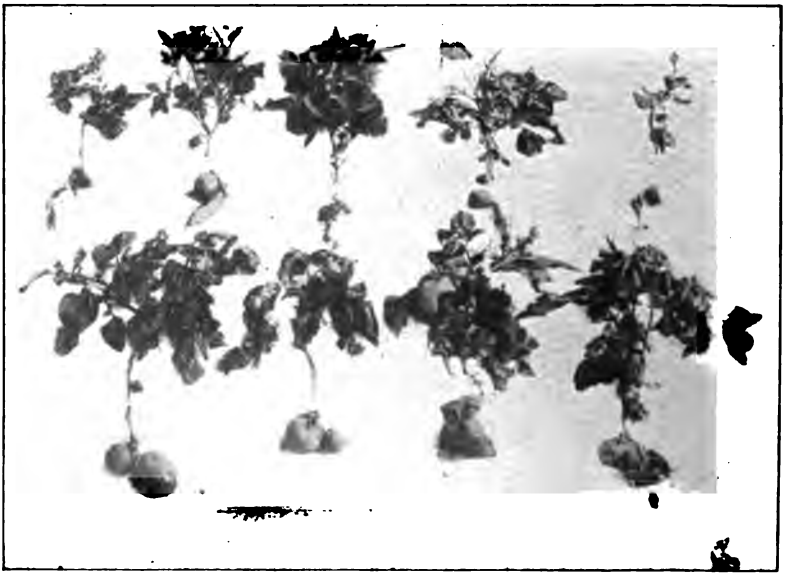

Fig. 38.— Plants Showing the Contrast Between the Larger Type and the Smaller Type of Inherent Lack of Vigor

Neither leaf roll nor curly dwarf are present. Note the close-set tubers.

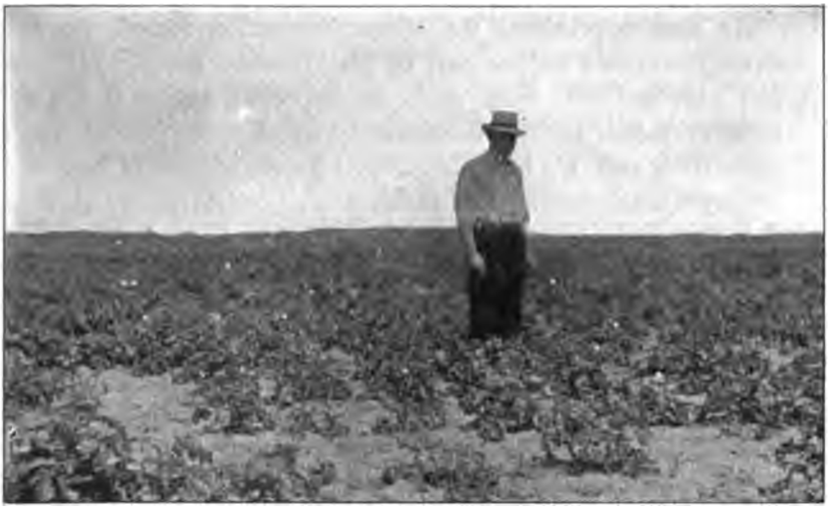

Fig. 39.—About the Average Growth of Fields Grown from the Recommended Maine Commercial Field, 1915

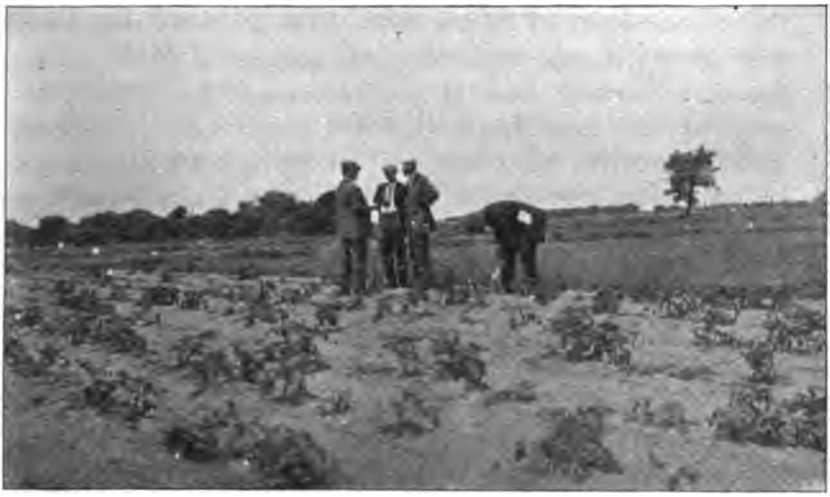

Fig. 40.—About the Average of Fields Grown from Seed Purchased at Random, 1915

It was this contrast that lent so much force the first season to the argument that Bliss could be improved.

SECOND SEASON OF INSPECTIONS, JUNE, 1916

As time approached the second inspection season, no little anxiety occurred on the part of Mr. Wortley and myself. We had promised that Bliss could be improved, and that the seed to be furnished by Mr. King was better than the general run of other Bliss seed. We had also induced the contractors in New York to pay an advanced price for that seed. Obviously, if a bad drought came on nothing could have been accomplished thereafter. However, the season was favorable and matters went very well.

In the meantime Mr. King had given this strain a good roguing, being instructed in this by the courtesy of an agent of the United States Department of Agriculture then in Caribou. The best stock he saved for his own planting next season. The balance was for Long Island. About twelve thousand plants were removed and destroyed from four acres. As near as it could be judged, 11 per cent of doubtful ones remained.

It is necessary to rogue for mosaic when the plants are young, say eight to twelve inches; otherwise, as the season progresses and they become larger, the color markings become obscured.

During the inspection of 1916 in Long Island, it was found that mosaic averaged 28 per cent. This pointed directly to the fact that during the transition from growing in Maine to Long Island, a breaking down of what apparently was healthy stock occurred. In June Mr. Wortley and myself were quite positive that this was the case; but special experiments were conducted in which conditions could be better controlled, whence it was found that apparently healthy plants did break down. This also corresponds with Stewart's findings.*

In regard to the results in 1916, as compared to those in 1915, the best field in 1915 was not so vigorous as the poorest in 1916; however, the season was very favorable in 1916 as to rainfall and temperature.

This year we again had a demonstration of the value of selected seed versus seed bought on the open market. This was unwittingly furnished to us by one of the contractors. It seems that he became short of the required number of bushels to fill his contracts with selected stock. He accordingly finished out with seed purchased on the open market. Fortunately, he did not mix this with the selected seed, but gave it out in its original containers. Of this, he had not intended to inform the inspectors.

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* Stewart, F. C.— Bulletin 422, New York Agricultural Experiment Station, September, 1916.

While conducting the inspections, the first six fields ran about normal. The rest of the fields went to 80 per cent mosaic, and in some every plant was affected. It was clear that this was a different lot of seed. We informed him to this effect and after some discussion he admitted the above facts. (See Fig. 44.)

Another striking example was furnished by a grower who lacked enough of the good seed to fill out about one-sixth of an acre. He bought additional seed of the grocer. The difference in the field could be detected almost to the plant.

The yields this season averaged about two hundred and twenty-five bushels per acre. A surplus was produced and considerable trouble experienced in disposing of it, also much loss in transportation occurred. At digging time, it became evident that Fusarium wilt was present in the Orient section, and that at the time of inspection it was not far enough advanced to be detected. Bad infections of late blight occurred, which, during the hot days in the latter part of August, caused heavy rotting.

As a result of this season's observations, the following conclusions were drawn:

1. That the Bliss Triumph has been greatly improved by the elimination of weak plants rather than by the increase in yield of individuals.
2. That the selection methods applied to this variety can be extended to some other varieties.
3. That in spite of any selection methods, a certain amount of breaking down will occur.
4. That 2 or 3 per cent of leaf roll appears to be the limit of control for this variety.
5. That Fusarium wilt is apparently established in the Orient Point fields.
6. That, owing to fogs, late blight is an annual occurrence and spraying cannot be neglected.
7. That, unless the stock after harvest is re-sorted in New York

before exporting, potatoes that decay in the hot cars in transit from eastern Long Island to New York City, cause extended rots on the ships with consequent heavy losses.

8. That leaf roll and mosaic sometimes occur on the same plant.

Summary

Fields inspected	94
Fields passed	84
Fields condemned	10 and part of another

All of these condemned fields were stock purchased on the open market.

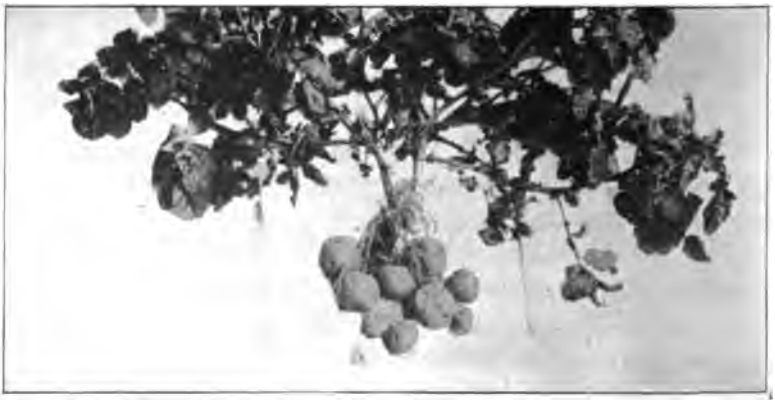

FIG. 41.— THE VINE AND TUBER SET OF A HEALTHY BLISS PLANT

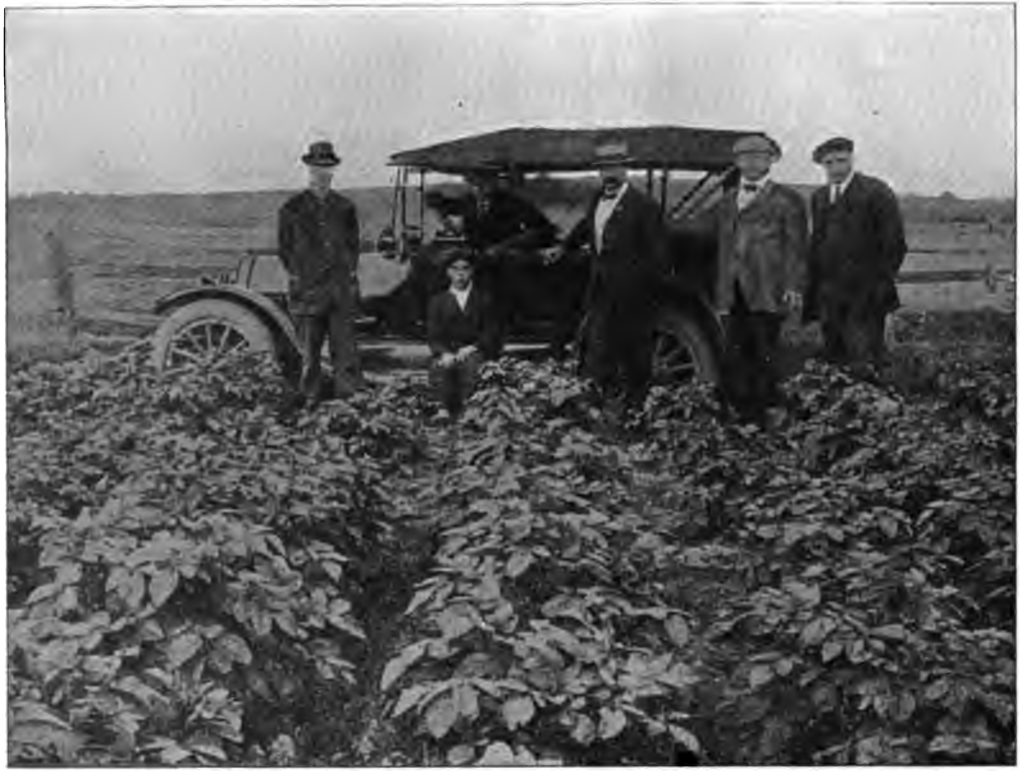

FIG. 42.—A FIELD OF BLISS IN 1916 FROM ROGUED MAINE STOCK
Note the vigor of the Foliage.

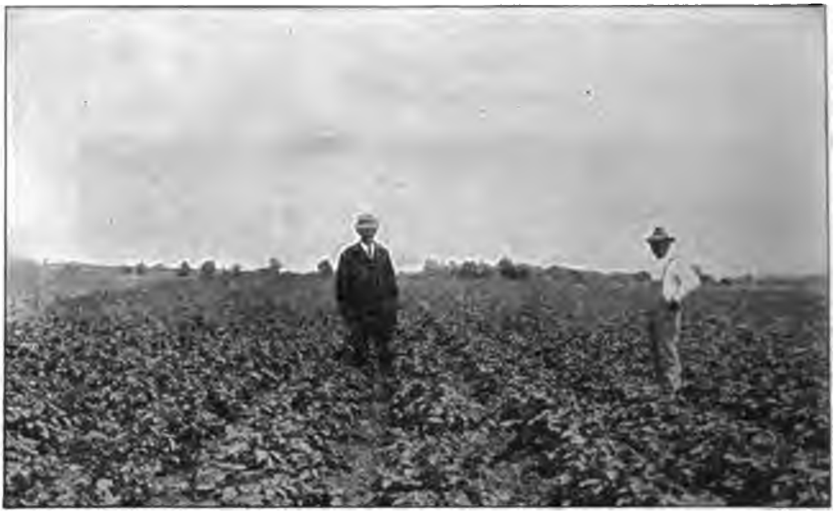

FIG. 43.—A FIELD SHOWING THE LEAST LUXURIANCE OF THE ROGUED MAINE STOCK IN 1916

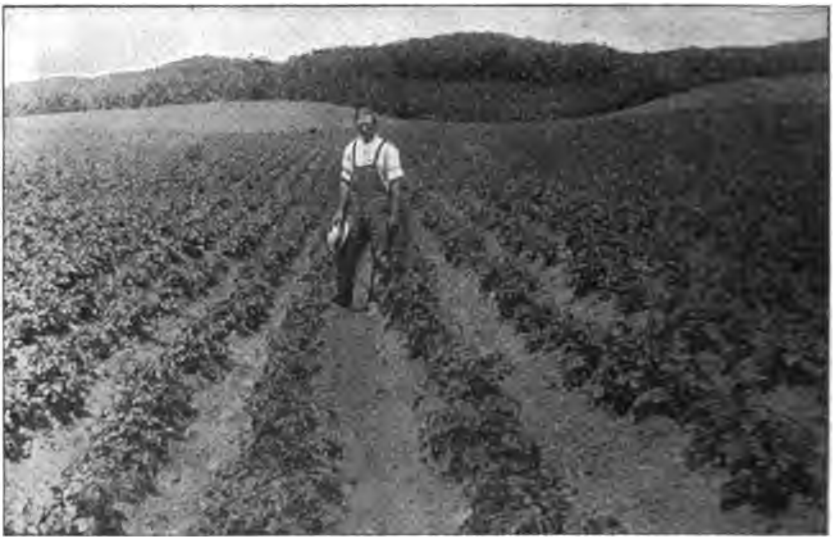

FIG. 44.— SOME OF THE SEED PURCHASED ON THE OPEN MARKET GROWN BY CHARLES SANFORD, RIVERHEAD, N. Y., 1916

One hundred per cent mosaic existed.

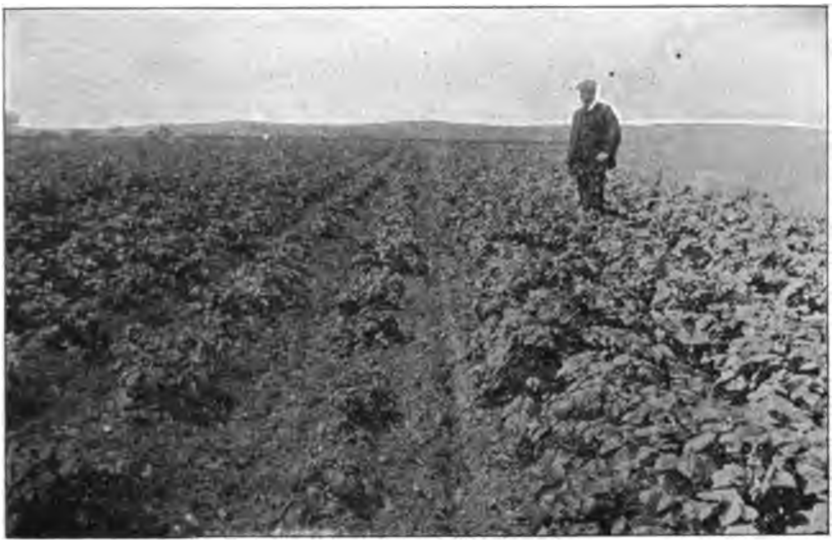

FIG 45.— NEW YORK STATE, CORTLAND COUNTY, BLISS ON RIGHT WITH LESS THAN ¼ PER CENT MOSAIC

The two center rows consist of stock saved from the previous season. That on the left is the same stock as in Fig. 42.

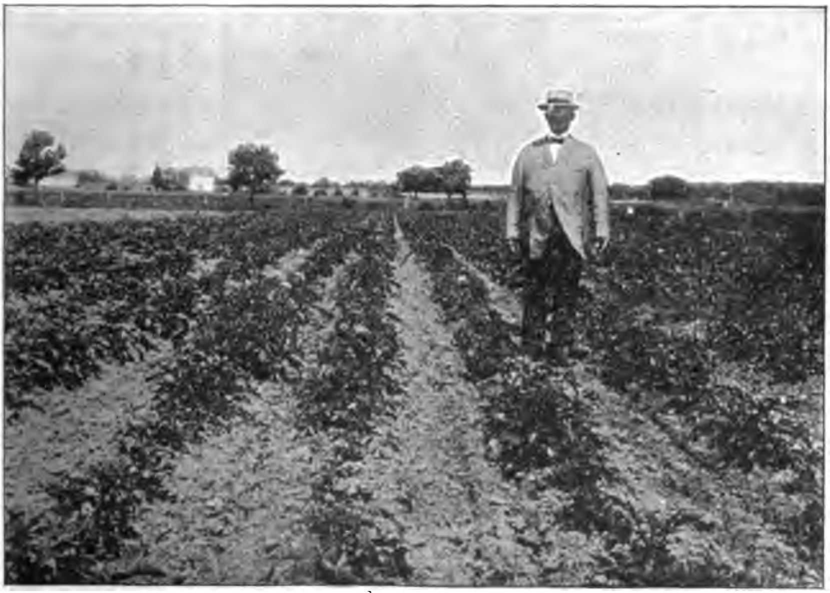

FIG. 46.— FIELD OF GREEN MOUNTAINS CONTAINING EVERY FORM OF DEGENERATE PLANT

The field was planted from potatoes grown on Long Island the previous season. Sometimes if the strain is especially strong and the season favorable the practice might give returns. Continued for a third season, the result is usually a failure.

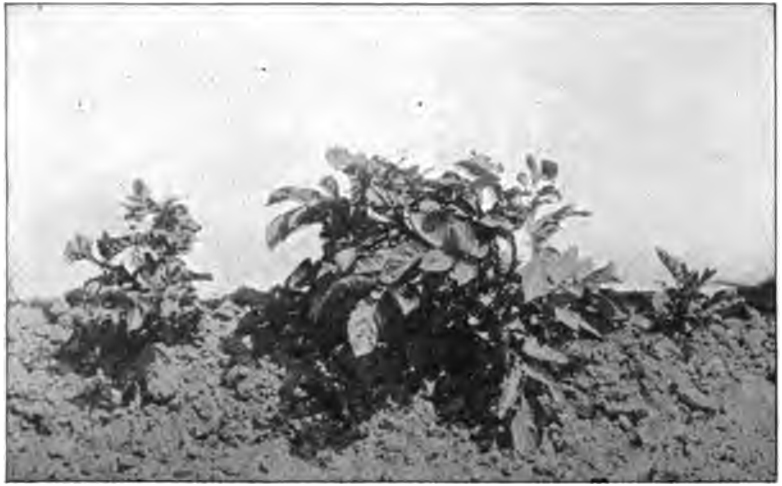

FIG. 47.— LEAF ROLL ON THE LEFT, HEALTHY PLANTS IN THE CENTER, AND INHERENT LACK OF VIGOR ON THE RIGHT

This picture is part of a row seen in Fig. 46.

THIRD SEASON OF INSPECTIONS, JUNE, 1917.

The season started with promise because it was no longer necessary to exhort the contractors to purchase selected seed. The results this year so far exceeded the best hopes of Mr. Wortley and myself that it has been suggested that perhaps some benevolent factor of nature interceded to produce the effect, and that if we are granted unfavorable temperatures, moisture, and soil conditions, the stock will be found much below what we now believe.

Be that as it may, no such quality or no such yields have ever before been known to growers of twenty-five years' experience with this potato on Long Island, as reported by a farmer who had been growing Bliss for this period. A variety too miserable in vine and vigor to yield more than an average of sixty-five to one hundred bushels of small potatoes per acre, last year ran 225 bushels of excellent tubers and this year 350 bushels as a general average, with the largest yield going to 400 bushels on the farm of Edwards Brothers, Orient Point, L. I., the lowest being 250 bushels on the farm of H. E. Aldrich, Riverhead, L. I. The most remarkable stand of plants was secured by Mr. George Wells, Mattituck, who had ten acres, each plant of about equal vigor and size, and no misses. (See Fig. 50.)

This result has been accomplished, in the first place, by the persistence and energy of Mr. E. J. Wortley, Director of Agriculture for Bermuda. As it was necessary to reach the source of this seed for any fundamental improvement, that had to be done in Maine.

It was found necessary to centralize and limit the production of the Bliss seed for Long Island to one person. By this means, energy was put to the most economic use, and education and propaganda bearing on the methods determined to be effective by the inspections were concentrated; hence, the full value of the criticisms resulting from experience both in Long Island and Bermuda could be imparted without loss of time or scattered attention, as would be the case had several been involved in this production. It is of course obvious that this individual was an operator of magnitude and fully capable of growing, without difficulty, the large quantity required for Long Island. Also it will be recalled that in 1914 this grower was furnished with potatoes from the best field that could be found in Maine. It is to be noted that for two seasons this strain has been systematically selected by roguing and the weak plants removed under constant criticism from an agent of the United States Department of Agriculture who happens to be located in Caribou, Maine, and also from Mr. Wortley.

It is readily seen that this system has crystallized into the very best control that is possible without the Bermuda government or our own actually taking over the production of the stock.

The scientific practical growing has probably been of the least trouble. The political side has given no end of confusion and uncertainty, due to the manipulation of the prices for the seed when grown. Constant advances have been made from time to time as the producer has realized his monopoly of the strain. Jealousy between the various contractors on Long Island who put the seed out among the growers occurred, some offering to take it back at $1 a bushel when the nominal price was 85 cents, thus creating dissatisfaction among the growers.

It was necessary continually to untangle such difficulties, to carry on inspections, and simultaneously to conduct educational propaganda as these inspections progressed.

PRESENT OUTLOOK FOR BLISS TRIUMPH POTATOES

The Bliss situation is excellent. It demonstrates what can be done in a commercial way by proper selection and supervision of a strain of potatoes.

Because the farmers had raised, due to the large yields, many more than the Bermuda growers could use, the surplus found its way to our own South and made a great showing — so much so that this field has now been opened up and gives promise of another lucrative market for our Long Island farmers.

It is to be noted that two lots of Bliss potatoes selected at Cortland, N. Y., in 1916, were shipped to growers in northern New York that season. These growers wish to compete with the Maine producer previously mentioned. These two lots consisted of 150 pounds each. They were planted and I inspected them during the summer. One was found to be unfit for further consideration, and I rogued the other myself so as to be sure all undesirable plants were destroyed. It might be well to add here that in any inspection system of this nature, the plants should be pulled out by the roots and dried. The grower usually wishes to leave them in, saying they will pay something and can be taken out first at harvest time. That is very bad practice, because usually they are either forgotten or overgrown so as to be undistinguishable, or else mixed in later.

The 150 pounds referred to above were brought to maturity, and, after losing 400 hills by roguing, yielded 4,650 pounds of tubers. This will give the grower enough to plant about four acres. I shall rogue the field again this summer and incidentally instruct the farmer how to recognize the troublesome plants himself.

Since Wilson Brothers, Flatbush Ave., Brooklyn, N. Y., are contracting for the production and have found a southern market, it looks as if Bliss was once again to assume its position as a standard market variety, especially for our southern planters. It will obviously produce another source of income to our northern New York growers, aside from the demand for it they will have from Long Island.

The noticeable breaking down of the healthy plants into minor degrees of mosaic was again particularly evident this season.

The results of the inspection for the season of 1917 were as follows:

Fields inspected	107
Fields passed	103
Fields condemned	4 and parts of 3

This season we again had opportunity to compare stock purchased on the open market versus the selected seed. Another contractor, not heretofore operating, wished to enter the field. As he was unable to purchase any selected stock, he decided to take a chance on open market seed by first having it sorted before distribution to the growers. Out of eight fields planted with this stock, five survived the inspection and three were condemned. The best of those that passed was inferior to the poorest of those planted with the selected Maine seed.

The following illustrations should be compared with those of the first and second seasons:

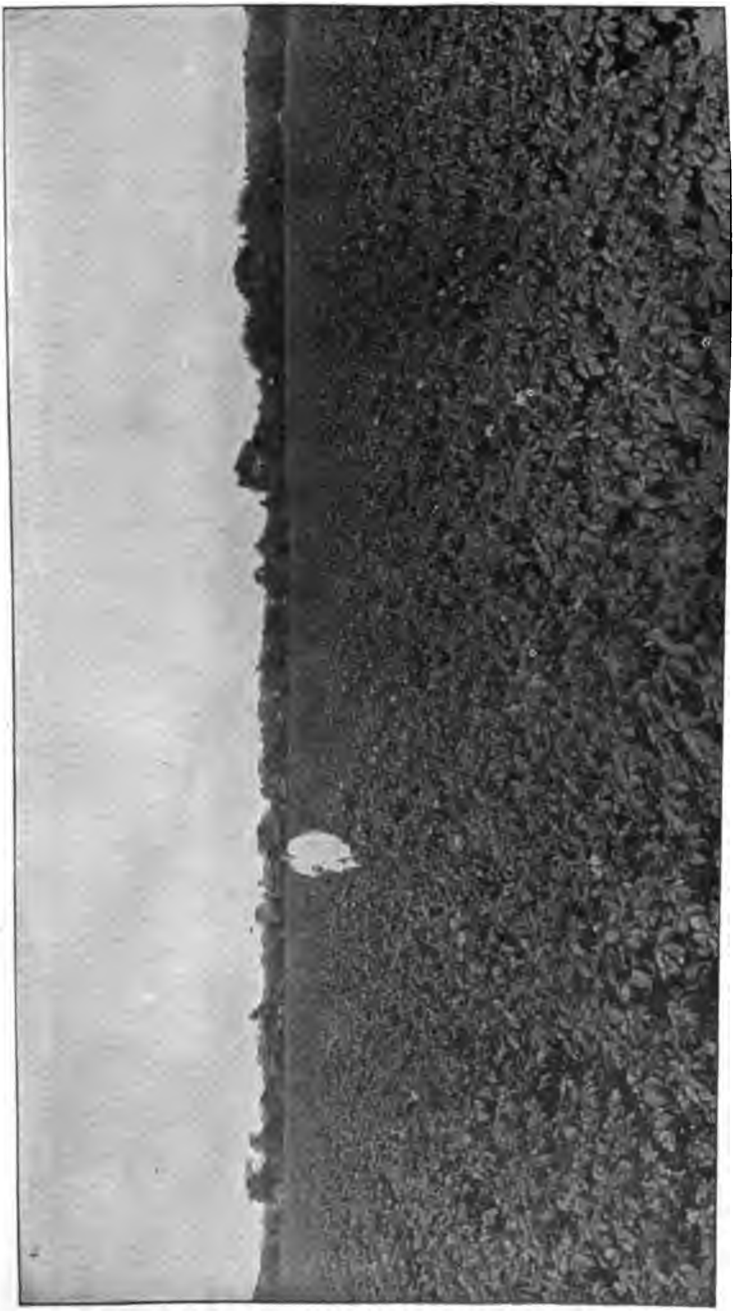

FIG. 48.—A GOOD STAND, WITH NO MISSING HILLS
Note how the rows are filled in.

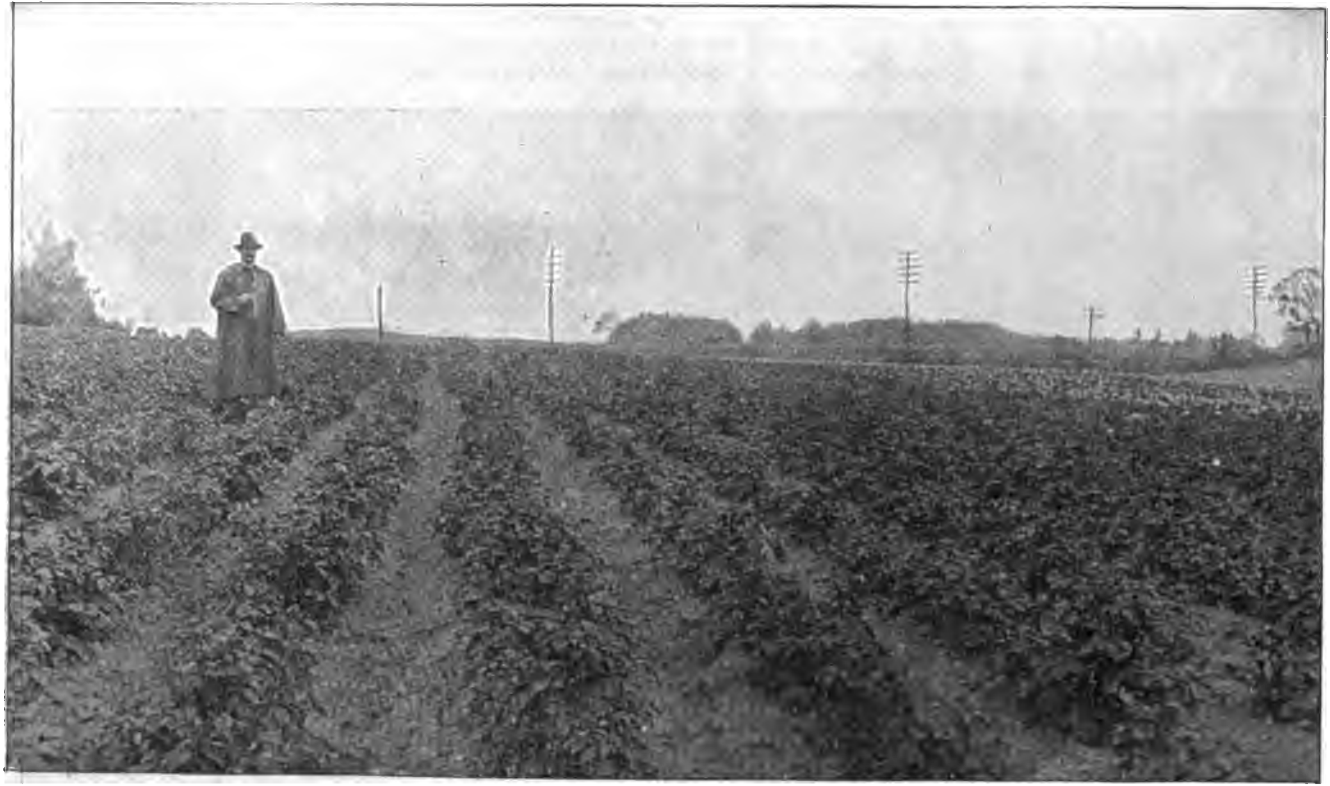

FIG. 49.—TYPE OF FIELD CONDEMNED

This field was not planted with selected Maine stock, but with seed from the open market.

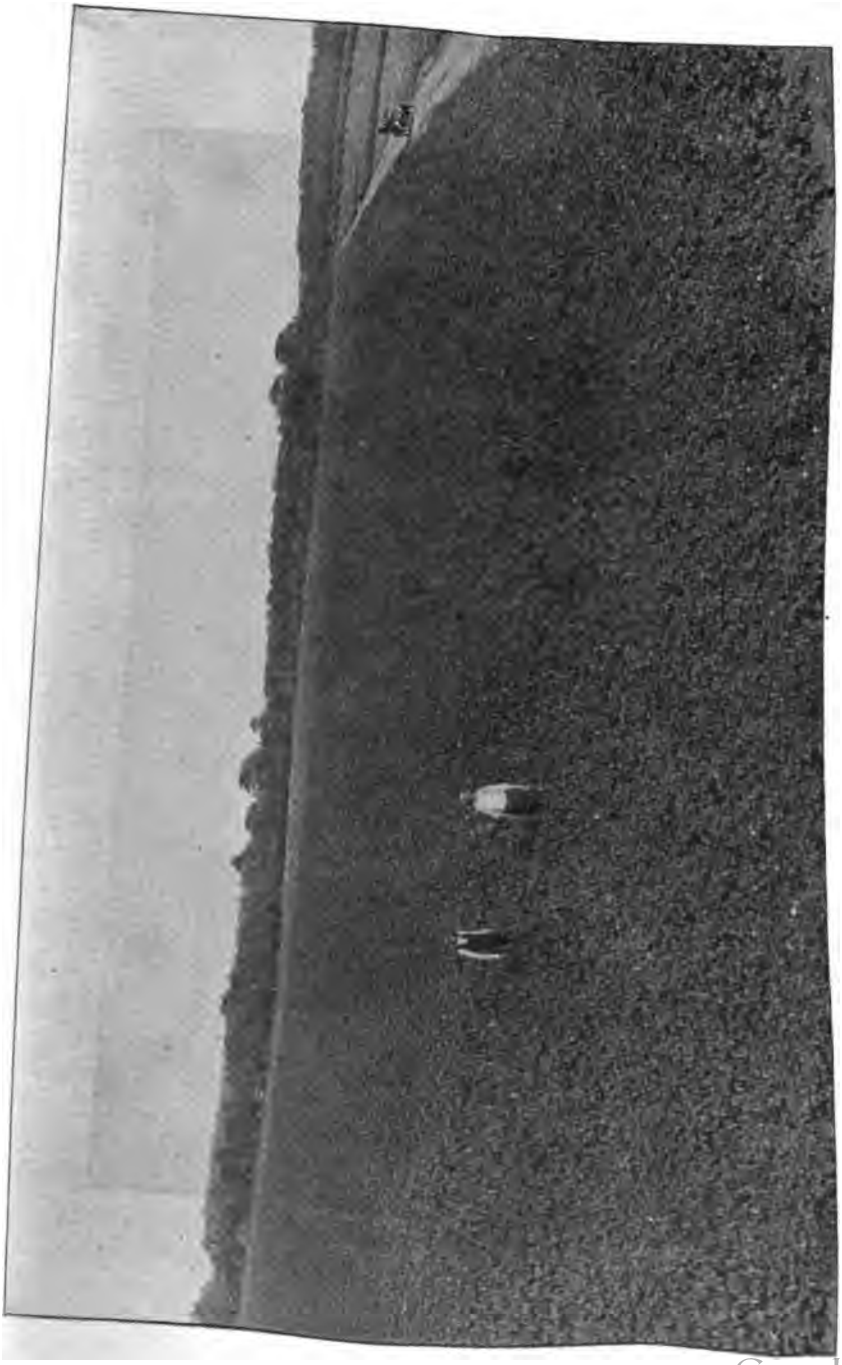

FIG. 50.— THE MOST REMARKABLE FIELD SEEN ON THE FARM OF GEORGE WELLS, MATTITUCK, L. I. Plants were all the same size and no misses.

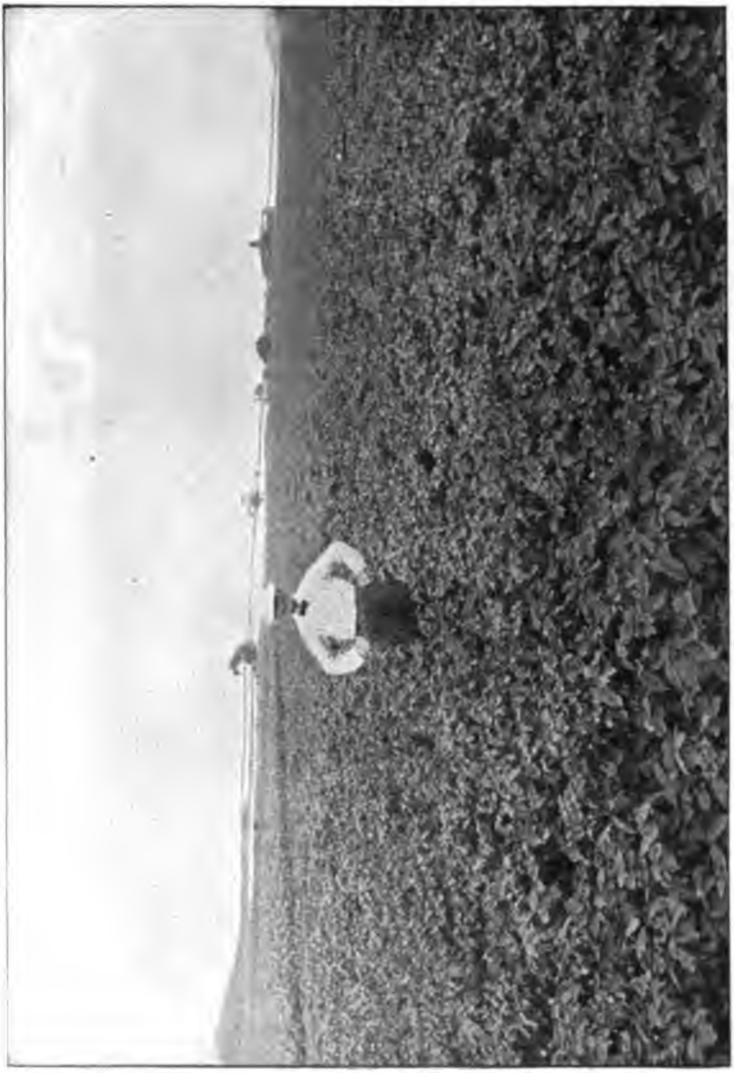

FIG. 51.— A FIELD AT ORIENT POINT, L. I. GROWN BY I. T. EDWARDS.

Here the Bliss reaches its zenith but unfortunately on account of sea fogs blight is usually present.

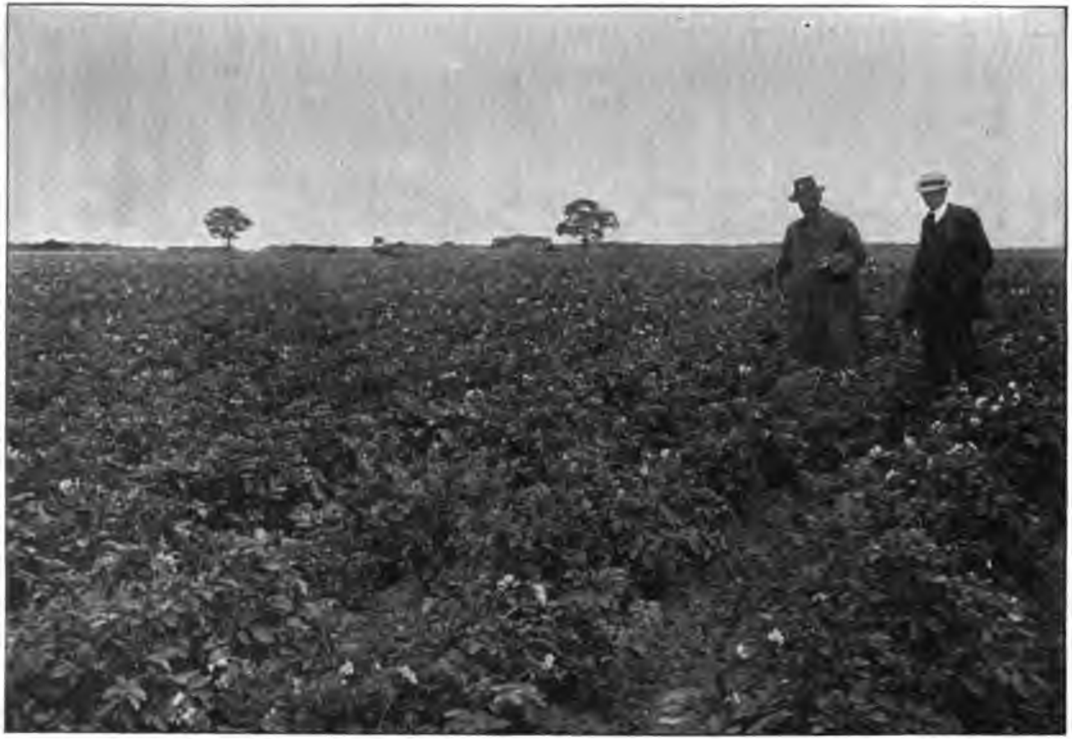

FIG. 52.—A FIELD OF GREEN MOUNTAINS SHOWING 40 PER CENT LEAF ROLL.
This variety should receive the same selection as accorded the Bliss, since it is subject to the same troubles.

THE POTATO AS A FOOD

IDA S. HARRINGTON, ROCHESTER, N. Y.

Farmers' Institute Lecturer

As the cost of living mounts higher and higher, housewives are learning that true economy in the purchase of foods depends on their ability to answer the following questions: "What kind of an investment am I making when I spend money in buying this, time and strength in preparing it, and digestive power in making it useful to my body? How can I prepare it in order to obtain the best possible return in food value?" The working out of these problems seems hardest in connection with our most common foods, because with them familiarity has bred contempt; we have come to take them so much for granted, and our method of handling them has become so largely a habit, that we fail to study their possibilities as we should if our attention were turned to them for the first time.

If we studied a potato as though we had never seen one, in order to determine what it is made of, what value its ingredients have as a food, and by what principles of cookery that value could best be obtained, we should proceed somewhat as follows: We should scrub the potato clean, pare it, and allow it to stand in a bowl of cold water for a time, since one of our first questions regarding the digestibility of a food is, "Is it soluble or can it be made soluble?" When the potato has stood in the bowl of water for a time, a white insoluble powder is seen at the bottom of the bowl which we decide is starch. To prove this, we apply a drop of tincture of iodine. The powder takes on a blue color, showing that it consists of starch, and that the principles of starch cookery and of making starch soluble must govern our manner of preparing the potato.

Professor Atwater tells us, in his table on the composition of vegetables, that starch makes up about 14.7 per cent. of the potato as purchased, and that in addition it is made up of 62.6 per cent. of water, 1.8 per cent. of protein, .1 per cent. of fat, .8 per cent. of ash, and 20 per cent. of refuse. It is plain, therefore, that the food value of a potato lies not in its power to build or repair body tissue (since it is only 1.8 per cent. protein) but in its ability to yield energy through containing 14.7 per cent. carbohydrate. When we fully understand that carbohydrates are our cheapest and best source of energy, and that the use of protein foods for this purpose is expensive and wasteful, we shall have taken a long step toward economical buying and cooking. Protein is necessary for the construction of our human engine, but carbohydrates must furnish the larger part of the fuel, both for immediate use and as a reserve fund for a "rainy day."

How does the potato compare with other starchy foods in food value? In the Cornell bulletin on "The Cost of Food," it has been carefully worked out: First, how much of a given food it takes to furnish sufficient energy for a day's average muscular work, and, second, how much energy various foods yield for ten cents. We find that potatoes at two cents a pound are a little more expensive as a source of energy than are rice, dried beans, or lima beans at ten cents a pound, but that potatoes give us a much better return for our money in mineral matter, such as lime, iron and phosphorus, than does rice. The potato is further valuable in adding bulk to the diet, an advantage that we can not afford to overlook. If the day should ever come when the concentrated food tablet, containing no waste, became the rule, our digestive organs would perish for lack of exercise.

PRINCIPLES OF PREPARATION

Whatever primitive man was able to do in regard to digesting starch in its raw form, we need today every help that careful cooking can furnish in order to get a full return from our starchy foods. We must make use either of long cooking at a moderate temperature,— as in boiling a potato,— in order to make the starch soluble, or of cooking at a temperature high enough,— as in baking a potato,— to change some of the starch into dextrine. An ideal boiled potato should be snowy white, dry, mealy, and tender throughout, without being cooked to pieces. Scrub the potatoes clean and pare them *thin* if they are not to be boiled in their skins. We undoubtedly lose mineral matter, protein and starch through careless paring, not to mention the fact that it takes less time to pare a potato after boiling than before. The skin also protects the outer surface from being boiled to pieces. Unless potatoes are old and have lost much water through evaporation, they should not be left standing in cold water. We want to preserve every granule of starch for food, and that is impossible if the potatoes are soaked. Put the potatoes on in boiling salted water. Keep the water boiling steadily, but not so rapidly as to powder the outside of the potato before the inside is done. As soon as the potatoes are tender throughout (in from twenty to thirty minutes), remove the skins if they have been left on, drain the potatoes perfectly, cover loosely with a clean cloth to absorb the moisture, and set in the oven, with the door open, for five minutes to dry. If the potatoes are to be mashed, run them through a potato strainer or pound them with a potato masher until perfectly free from lumps, as soon as they are thoroughly drained. To eight potatoes, allow three level tablespoons of butter, one-half teaspoon of salt, and one-half cup of milk. Beat until light and fluffy. A perforated cake spoon is a good thing to use. Do not pack the mashed potato down in the serving dish but pile it irregularly, so as to keep all the lightness that has been beaten in. In baking potatoes we go a step farther in making the starch available for the human body. Instead of merely making the starch soluble, we apply a sufficiently strong heat to change starch to dextrine. It is the same result that we obtain when we brown the crust of our bread or brown flour for gravies. This change makes starch much more digestible, and hence we prefer a baked potato to a boiled one, in feeding a child or an invalid. In order to get the desired result, however, we must have a good brisk oven. If we bake a potato in a slow oven, we defeat our own ends. Such a potato is, if anything, less digestible than one which has been carefully boiled. Therefore, it is important to thoroughly scrub a potato with a vegetable brush before baking, not only as a sanitary necessity but because it aids the heat in penetrating quickly to the heart of the potato. A moderate-sized potato should bake in about forty-five minutes, and is at its best as soon as it is tender clear through. Potatoes should be turned at least once during baking. When taking them from the oven, break the skin to let the steam out. Serve in an uncovered dish. The mealiest potato is made soggy by condensing steam.

Stuffed Potatoes

Cut well-baked potatoes in half lengthwise. Remove the pulp and prepare like mashed potato. Add a little finely chopped ham if liked as a seasoning. Return the mixture to the skins and brown in the oven.

French Fried Potatoes

Scrub, pare thin, and cut in eighths lengthwise. Let them remain in cold water only until all are ready; if left for an hour in cold water, much starch is lost. Drain between cloths. Fry in deep fat, hot enough so that a cube of bread will brown in it while you count fifty or sixty. This is the best temperature for frying any food that has not been previously cooked. Drain on brown paper, and sprinkle with salt. With a deep iron frying kettle, such as is used for doughnuts, and a wire frying basket, this is a simple and easy way of preparing potatoes.

Potato Yeast

One-half cup of sugar, two or three boiled potatoes, one-quarter cup of flour, one quart of potato water and one cake of yeast foam. Mix sugar and flour with the potatoes, add the boiling potato water, and, when lukewarm, the yeast dissolved in water. Let stand in a warm place twenty-four hours, stirring as it becomes light and frothy. Fill fruit jars half full with the mixture, and close tightly. Store in a cool place. Use one-half cup of yeast to a pint of liquid in setting bread over night.

USE OF LEFT-OVER POTATOES

Potato Stuffing for Poultry

Janet McKenzie Hill

" Mix together two cups of mashed potato, one cup of soft bread crumbs, and from one-quarter to one-half cup of butter. Season to taste with salt, pepper, summer savory or poultry seasoning, and add one beaten egg."

Cream of Potato Soup

Thin one cup of mashed potato with one cup of hot milk, and add to a cream sauce made of one quart of milk, four level tablespoons of butter, and four level tablespoons of flour. Season with pepper, salt, and chopped onion or onion salt. Simmer for half an hour, and thin with hot milk if desired.

Potato Pastry

Janet McKenzie Hill

"Two cups of flour, one-half cup of shortening, one-half teaspoon of salt, one cup of cold mashed potato, two teaspoons of baking powder and milk as needed. Sift together the flour, salt and baking powder. Work in the shortening with the tips of the fingers or a knife. Add the mashed potato, and milk enough to make a soft dough. Turn on to a floured board. Handle as little as possible. Pat and roll to fit the top of a dish filled with cooked and seasoned meat. The pastry should be one-quarter to three-eighths of an inch thick."

UNUSUAL USES FOR POTATOES

Potatoes as a Foundation for Candy

Mary Elizabeth Hall

"Cooked potato fondant. Boil or steam potatoes and force them through a fine sieve. With one-half cupful of potato, so prepared, mix thoroughly two cupfuls of sugar and thin with two-thirds of a cupful of milk. Place the mixture on an asbestos mat over the fire and cook until thick — to the sticking point. Pour the mass on a cold, damp marble and "cut in" like plain fondant. Kneed small quantities at a time until the whole batch is smooth. Pack in tins lined with waxed paper. The fondant can be used without additional sugar and does not stick to the hands."

Potatoes as a Cleansing Agent

The Cornell bulletin on "The Laundry" describes the use of well-cooked potato mixtures as soap substitutes in washing delicate fabrics, and gives the following rule for potato water to be used in the laundry: "Grate two large-sized potatoes into one pint of clean, clear, soft water. Strain into one gallon of water. Let the liquid settle, pour off and use."

Raw potato, sliced thin, applied to a fresh ink stain on a carpet, and repeatedly renewed, will usually prove effective.

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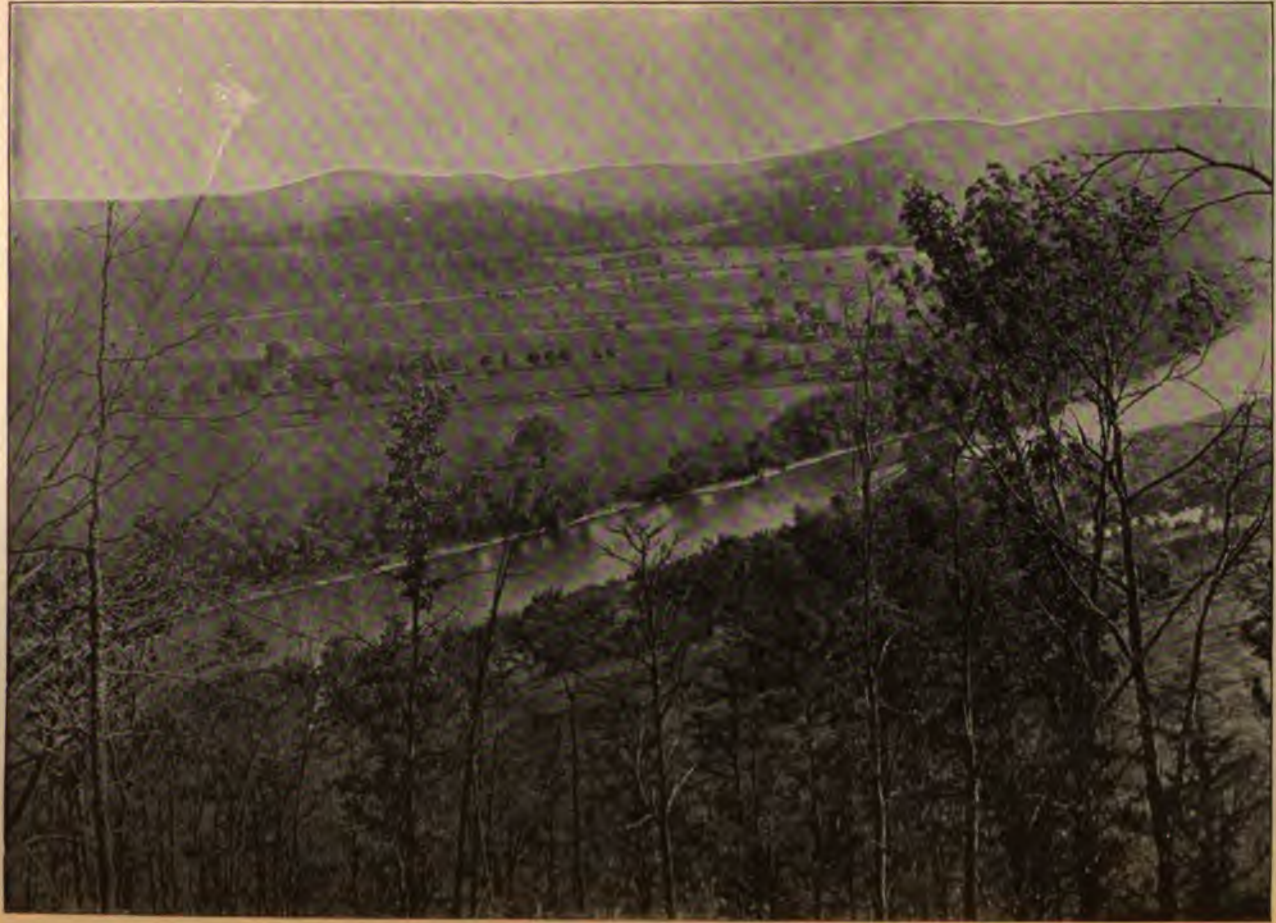
TABLE SHOWING TOTAL ACREAGE OF POTATOES AND NUMBER OF BUSHELS PRODUCED IN NEW YORK STATE BY COUNTIES (U. S. CENSUS, 1910.)

	Acres.	Bushels
Albany	3,708	283,564
Allegany	13,412	1,631,123
Broome	7,106	708,114
Cattaraugus	7,392	879,253
Cayuga	8,089	1,037,829
Chautauqua	6,329	778,277
Chemung	3,724	370,110
Chenango	4,843	671,087
Clinton	8,673	1,325,041
Columbia	3,144	232,702
Cortland	4,961	750,187
Delaware	4,331	479,061
Dutchess	3,041	300,275
Erie	23,587	3,014,450
Essex	2,769	269,319
Franklin	7,273	1,433,761
Fulton	2,485	271,868
Genesee	9,585	1,217,791
Greene	1,948	160,133
Hamilton	418	46,324
Herkimer	4,167	520.121
Jefferson	5,319	789,027
Kings	591	57,728
Lewis	4,102	627,771
Livingston	11,163	1,438,699
Madison	4,566	619,283
Monroe	20,211	2,796,728
Montgomery	2,007	193,644
Nassau	8,685	1,168,369
New York	38	6,776
Niagara	6,918	663,192
Oneida	8,721	1,192,575
Onondaga	13,794	1,671,835
Ontario	14,857	1,642,755

	Acres.	Bushels.
Orange	3,063	788,341
Orleans	4,111	571,609
Oswego	7,507	997,874
Otsego	7,946	1,059,120
Putnam	863	85,494
Queens	2,581	391,804
Rensselaer	10,008	1,142,796
Richmond	139	13,798
Rockland	958	66,909
St. Lawrence	7,321	1,184,162
Saratoga	7,278	579,652
Schenectady	1,135	87,140
Schoharie	3,273	307,746
Schuyler	3,045	365,815
Seneca	2,833	290,310
Steuben	30,524	3,279,953
Suffolk	15,407	2,200,178
Sullivan	3,312	259,461
Tioga	5,960	729,523
Tompkins	4,908	689,360
Ulster	4,282	293,415
Warren	1,882	163,673
Washington	10,443	1,375,013
Wayne	9,280	1,049,202
Westchester	1,757	147,853
Wyoming	9,879	1,493,071
Yates	2,667	235,657
State	394,319	48,597,701



Looking Across the Chemung River Valley at Elmira.

UNIV. OF MICH.

STATE OF NEW YORK
DEPARTMENT OF FARMS AND MARKETS
DIVISION OF AGRICULTURE
CHARLES S. WILSON, Commissioner

Bulletin 103

Farms for Sale or Rent in New York

1918

(Occupied and Unoccupied)

Compiled by
FRANK C. CARR
Director, Bureau of Farm Settlement

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PREFACE

The intent of this bulletin is to bring together prospective buyers and sellers of farms in the state of New York, and to give to those dwelling outside the state an idea of the farms to be had here at low prices. In the great majority of cases the reasons given for disposing of farms are the old age, poor health, retirement, or death of an owner and settlement of the estate. In a few instances owners are asking very low prices for excellent properties because of the difficulty in obtaining labor, a situation resulting from extraordinary war conditions, and for the relief of which plans are now being made.

A careful and thoughtful comparison of the agricultural conditions obtaining in New York and other states will convince almost anyone of the attractive advantages of the Empire State. The population of New York being over 10,000,000, our farmers have practically at their doors about one-tenth the Nation's population as purchasers, a fraction which is very much increased when the markets immediately adjacent to our boundaries are taken into account.

To these ample markets there are unexcelled transportation channels. Many steam and electric railway lines, reaching to all farming sections, furnish rapid and easy communication with numerous large cities and towns. Large waterways, such as the Hudson River, Lake Champlain and Lake Ontario, the Champlain and Erie canals, put the extreme north and south, east and west points of the state into direct, easy, and particularly reasonable connection, and help to keep low the freight rates by rail.

Macadam, cement, and brick highways, built, improved, and kept in constant good repair by state, county, and town, now cover the entire state to such an extent that there is no agricultural section that is not now provided with roads over which heavy loads can easily be drawn to good markets or shipping points.

SOILS

The soils of the state of New York are exceedingly diversified. The U. S. Department of Agriculture, in cooperation with Cornell University, has mapped about one-third of the state, such part being disposed here and there in the state by counties or special areas. Glacial till, which is noted for its long-continued productivity, is, however, the prevailing type of soil. This is particularly adapted to corn and grains, as well as large dairies. Loams, ranging from the finest to the coarsest texture, are found on nearly all farms, and are very well adapted to the growth of a great variety of crops, depending on the altitude and consistency of the soil; among which products may be mentioned wheat, oats, barley, rye, corn, potatoes, beans and cabbage. In nearly all the large and broad river valleys, of which New York possesses striking examples, such as the Hudson River, are found great tracts of rich alluvium, upon which notable crops of oats and wheat are grown. In certain sections, particularly along the south shore of Oneida Lake, north of Cayuga Lake, and in Genesee County are extensive deposits of black muck, as well as smaller patches scattered all over the state. Some parts of these areas are now well drained and others in course of improvement. Exceptional opportunities for large financial returns from the growth of excellent garden truck,— such as onions, celery, carrots, beets, potatoes, and tomatoes,— are offered upon such land.

TOPOGRAPHY

The surface of the state, rising from sea level to 5344 feet, the altitude of Mt. Marcy, in Essex County, the highest point in the state, is naturally divided into several physiographic provinces.

Ontario Plain, a belt of land in low relief, remarkably free from any striking surface features, extends along the southern shore of Lake Ontario, prolonged in a narrow strip along Lake Erie, and includes the counties bordering the former lake. This plain rises gradually from lakes Ontario and Erie, altitudes 247 and 573 feet respectively, to about 900 feet above sea level, where it merges into the Southwestern Plateau Province.

The Southwestern Plateau Province, which embraces the southwestern portion of the state, runs imperceptibly into the Catskill Mountains, the eastern face of which sharply separates it from the Hudson Valley; and in the north it is distinguished from the Mohawk Valley and the Ontario Plain by a more or less abrupt slope. From its northern boundary, which is 500 or 600 feet above sea level, it rises to a height of over 2000 feet in the east and west. A central north and south depression, lowest at Seneca and Cayuga lakes, is a feature of this section.

The Hudson and Mohawk valleys may be conveniently considered together; the former extending north and south near the eastern state boundary; and the latter east and west through the east central part, and separating the Adirondack Mountain province from the plateau section. The Adirondacks, however, being a mountainous wilderness, have no value agriculturally. A considerable variety of soils occurs in these valleys, giving rise to development of agriculture in various special lines.

A small belt along Lake Champlain, and a more extensive area along the St. Lawrence River, of great fertility, answer to the same description. The elevation of these valleys is rarely over 500 feet.

Long Island, the northern part hilly and the southern part a smooth plain, has a maximum height of less than 400 feet above sea level. The soil is well drained, being principally glacial sands and gravels, well-adapted to truck gardening, for which the province is chiefly noted.

CLIMATE

The following brief description of the climate of the state, as given in Department Bulletin 73, may well be repeated here:

"The climate of the Empire State is moderate, not running to either extreme of heat or cold. It is healthful and invigorating and free from malaria. Damaging frosts are so infrequent that it is unnecessary to consider them as factors in the situation. Floods, cyclones, destructive winds, storms and devastating pests are scarcely known.

"The rainfall throughout the crop-growing period is so evenly distributed that serious crop failure in the Empire State is rare. The general average is about thirty-six inches per annum for the State. Precipitation is greatest in June and least in October."

EDUCATION

The high standard of the Empire State's educational system, providing for 10,851 schoolhouses suitably placed throughout about 10,500 school districts, is an important factor. In no section are schoolhouses at a great distance from the farm, and there is consequently no reason why farmers' children should go without a very good education. For such of the younger generation who desire higher education, all the large cities have excellent high schools, colleges and academies.

DAIRIES AND STOCK

There are now many large and up-to-date dairy and stock farms located throughout the state, dairying being one of the principal industries. Central New York, the Mohawk and St. Lawrence valleys, and Delaware County are some of the notable sections. Dairying is now a very profitable pursuit to the New York farmer, and there are still many great opportunities for others. The annual milk consumption of New York City alone amounts to $180,000,000. Cheese and butter factories, condensing plants and milk stations are very numerous and lie at very short distances from all farms.

The demand for hogs is at present much greater than the supply; and with the prevailing high prices for pork, and the many splendid localities for profitable swine raising, an exceptional opportunity presents itself to anyone engaging therein.

The sheep industry has for many years declined in this state. But the recent soaring of the price of mutton and wool has changed conditions, making sheep a source of great profit. To encourage and protect the farmer in this industry, the state legislature has recently enacted a rigid law providing for the reimbursement of owners whose stock has been killed or worried by dogs, and for the destruction of the animals responsible for such damage. In consequence, many are now taking up this branch of farming, and several thousand sheep have been brought into the state within the past summer.

Poultry farms are scattered quite uniformly over the state, and are also profitable.

FRUIT

Fruit growing has long been recognized as one of New York State's strong points. The Ontario Plain in the region about Monroe County represents probably the highest development of this branch, the quality of the fruit being famous. Apples, pears, peaches, plums, and quinces are notable in this section. The production of fruit is a specialty also in the Hudson Valley, the Finger Lakes region — grapes especially — and Chautauqua County. Smaller profitable fruit farms are scattered as well throughout the rest of the state. The recent investigations of state and Federal entomologists have furnished us with means of successfully combating insect pests and producing far better and greater crops than ever before.

VEGETABLES

Whereas the farmers of the western and central states produce large crops of one or two kinds, New York is, by virtue of the variety of its soils, peculiarly adapted to truck gardening. There are, however, a few sections deserving special mention. Long Island is one of these, and the nature of its soil and environment fits it to produce large crops of such vegetables as potatoes, asparagus, cucumbers, and melons. Oneida, Madison, Onondaga counties, especially on the muck lands, produce remarkable crops of onions, celery, carrots, beets, cabbage, potatoes, and tomatoes. There is much of this land yet to be reclaimed, and a farmer desiring to operate in New York will find herein another opening to success. Near cities also trucking is profitably carried on. But practically every farm in the state produces more or less staple vegetables for its own use or for marketing.

GRAIN AND FORAGE

In the production of hay and forage New York ranks first. She does not occupy a high rank in the production of grains, such as wheat, corn, barley, and oats, because of the fact that other states to the west specialize in such crops, and New York goes in more for general farming. The possibilities are shown, however, by a comparison of the bushel yield per acre of New York and the 10 leading grain states, as given in the 1916 U. S. Department of Agriculture statistics. One instance, the case of wheat, will suffice for an example. New York produced 21 bushels per acre, while the average yield per acre of the ten leading grain states was 14.45 bushels. Corn is grown here mainly for ensilage. Nevertheless, New York produces profitable crops of oats, rye, barley, wheat, and buckwheat, especially in the western section.

The New York State farmer finds himself in possession of an ideal country home. On the average, farm buildings are well built and comfortable, and pleasantly situated. Transportation facilities are of the best and markets ample and near at hand. The relations of bed rock and surface soil, chiefly of loose glacial material, together with the topography, insure abundant and unfailing supplies of clear, pure water in springs, wells, ponds, lakes, and streams. A large area of the state is still in timber, located principally in the Adirondacks, a considerable amount in the Catskills, and more or less extensive groves are scattered over the entire state. The vast majority of farms possess timber lots that supply firewood, lumber for home or commercial use, maple sugar, and the like. Aside from the practical advantages offered here, it would be gross neglect not to mention the diversity of delightful scenery existing in the countless hills, mountains, valleys, streams, waterfalls, and lakes of all sizes, forests and meadows,— a weighty consideration with many farmers.

The world war has created special and unusual agricultural conditions. Generally speaking, never before has the farmer received such high prices for his products. The lower prices of land per acre in New York State and the very low rate of taxation, as compared with the west, makes his profit even greater than that of the westerner. For years the tide of migration has been from the east to the west, with the result that the cost of farms has tremendously increased in the west with the land and advantages no better than in the east, and in many cases not nearly so good. In a number of instances, farmers find that all the able-bodied farm laborers have taken their places in the army and navy, leaving the land owner without help and consequently desirous of selling out even at a low price. This condition has been recognized, and potent factors are now at work to relieve the situation; there is no question of its automatically disappearing at the end of the war. One great fact now stands out boldly — that farming is not a mere minor trade or occupation; it is the main bulwark of the nation, and without it the nation can not exist. This is now recognized by everybody, including the farmer himself, and the rural population is now banding itself together to maintain its standing.

In conclusion, it might be mentioned that the statistics given in the county descriptions are taken partly from the U. S. Census of 1910, and partly from Department Bulletin 89, "A Farm Census of New York State Taken by the Children in the Rural Schools." In the latter, "the work of enumeration was performed by upwards of 100,000 pupils in the public schools of the state, and was conducted under the supervision of district superintendents, principals, and teachers.

"No attempt was made to collect the information in the cities of the state, but in making up the totals the figures of the Federal Census covering cities were introduced in so far as they applied to this work."

If specific agricultural information in relation to New York State is desired, inquiries are earnestly solicited, and everything possible will be done to assist prospective settlers on New York State farms. The Department has on file, letters written by men who have moved into New York from various parts of the Union, telling their experiences and opinions of land here as compared with other sections of the country, matter of great interest and value to a prospective purchaser, and the Department will gladly endeavor to put interested parties in the way of securing such first-hand information.

CHARLES S. WILSON
Commissioner of Agriculture

Compiled by
FRANK J. CARR
Director, Bureau of Farm Settlement

NUMBERS OF FARMS THAT MAY BE RENTED

7, 10, 16, 17, 19, 33, 35, 36, 40, 41, 43, 47, 49, 52, 56, 58, 64, 66, 68, 70, 71, 75, 95, 96, 98, 100, 109, 110, 117, 122, 124, 140, 147, 148, 155, 156, 165, 171, 176, 178, 181, 186, 191, 192, 193, 197, 201, 207, 211, 212, 228, 230, 245, 247, 249, 256, 259, 260, 266, 269, 270, 276, 277, 284, 285, 286, 287, 289, 290, 291, 295, 310, 322, 333, 334, 336, 337, 338, 343, 349, 352, 361, 365, 376, 377, 378, 379, 380, 383, 390, 392, 394, 396, 405, 420, 423, 426, 427, 429, 430, 446, 448, 458, 461, 467, 471, 486, 505, 509, 511, 515, 525, 535, 546, 550, 551, 552, 563, 566, 567, 569, 570, 572, 573, 581, 582, 585, 588, 594, 595, 596, 600, 608, 613, 614, 618, 619, 624, 625, 628, 630, 639, 647, 649, 651, 660, 664, 665, 669, 677, 680, 681, 689, 692, 694, 695, 696, 698, 699, 702, 704, 709, 730.

NEW YORK STATE FARMS

ALBANY COUNTY

Area, 527 square miles. Population, 183,330. Number of farms, 3,146. Average value of farm lands per acre, $49.61. Annual total precipitation, 38.77 inches. Annual mean temperature, 50.3°. County seat, Albany.

Located in the eastern part of the state on the western bank of the Hudson river.

Surface is undulating and hilly, with a general drainage to the east.

The soil upon the intervales is a deep, rich alluvial loam. A considerable extent of the northeastern portion of the county is sand with strips of clay along the streams. Between this sand region and the foothills of the Helderbergs is a belt of clay and gravelly loam, very productive. Rye, barley, hay, potatoes, vegetables, dairy products and poultry are the chief products. The county is traversed by excellent lines of communication, by steam, water and trolley.

The educational and religious advantages are, like all the counties of the state, unsurpassed. Besides the excellent city schools, there are 146 district schools, and a State College for Teachers located at Albany. There are about 1,000 miles of state and county improved roads.

The value of all the farm property is $17,742,896, an increase of 11.8 per cent. in 10 years. Two thousand nine hundred and forty-six farms report domestic animals consisting of dairy cows, 12,707; horses, 8,766; swine, 12,093; sheep, 8,354; poultry, 261,685. There are fourteen agricultural organizations for the purpose of promoting farming interests and social life on the farm.

TOWN OF BERNE

Population 1,638

No. 1.— Farm of 143 acres; located 3 miles from East Berne P. O.; 11 miles from railway station at Voorheesville, on line of D. & H. R. R.; 1 mile from school; 3 miles from churches; 2½ miles from butter factory. Highways, good condition. Nearest city, Albany, population 107,979, 22 miles distant, reached by state road. General surface of farm, level. Altitude, 1,200 feet. Nature of soil, loam. Acres in meadow, 10; in timber, 20, maple, ash, beech, basswood and hemlock; acres tillable, 120. Fruit, apples and pears. Adapted to hay, oats, barley, buckwheat, rye, corn and potatoes. Fences, rail and wire. House, 6 rooms, and small store room. Outbuildings, horse and cow stable, granary, poultry house, 12x16, all in good condition. Watered, house by well; barns, by well; fields, by springs. Occupied by tenant. Reason for selling, old age. Price, $15.00 per acre. Terms, ⅓ cash, balance on time to suit purchaser. Address John W. Hays, owner, Brookview, N. Y. Will rent.

No. 2.— Farm of 184 acres; located ½ mile from West Berne P. O.; 9 miles from station at Schoharie, on line of D. & H. R. R.; ¼ mile from school; ½ mile from churches; 2½ miles from butter factory and milk station. Highways, good. Nearest village, West Berne, population, 269, ½ mile distant. General surface, level and rolling. Acres that can be used as meadow, all; in timber, 60, pine, hemlock, ash and hickory. Acres tillable, 125. Fruit, 3 orchards, consisting of apples, cherries, currants and peach trees. Adapted to hay, corn, rye, buckwheat and barley. Fences, woven and barbed wire. Large house for 2 families. Barns, 40 x 65 and 40x50; 3 sheds, 24x60, and hog house, in good condition. Good wells for house and barns. Fields watered by stream. Reason for selling, ill health. Address Fletcher Post, owner, West Berne, N. Y.

TOWN OF BETHLEHEM

Population 5,590

No. 3.— Farm of 133 acres; located 3 miles from Selkirk P. O., R. D. 1; ¾ mile from railway station at Wemple on line of West Shore Ry.; 1 mile from school; 1 mile from church. Highway in good condition. Nearest city, Albany, population, 107,979; distant 6 miles, reached by rail and highway. General surface of farm, chiefly level. Nature of soil, good. Acres in timber, 6; tillable,

127. Orchard consists of apples, pears and cherries. Adapted to hay, grain, potatoes and gardening. Fences, wire, in good condition. House; 8 rooms, wood house attached, in good condition. Outbuildings, barn, wagon house, cow shed with loft, hog pen, poultry house, corn crib, all in good condition. Watered; house, by good well and cistern; barns, by large cistern and spring. Hudson river, 1 mile distant. Occupied by tenant. Price, $7,500. Terms, $3,000 cash, remainder on mortgage. Address Mrs. John F. Shafer, owner, Selkirk, N. Y.

TOWN OF COEYMANS

Population 4,581

No. 4.— Farm of 280 acres; located ½ mile from Ravena P. O.; 1 mile from railway station, on line of W. S. R. R.; 1½ miles from school; 1 mile from churches; 6 miles from butter factory. Highways, hilly but good. Nearest city, Albany, population, 107,979, 13 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, 80; in natural pasture, 100; in timber, about 100, pine, hickory and oak, medium quality. Acres tillable, 80. Fruit, apple trees. Best adapted to grain and hay. Fences, stone, fair condition. House, 6 rooms, fair condition; 1 small barn. House watered by well and cistern. Reason for selling, to close an estate. Price, $3,500. Terms, cash. Address, Howard N. Fuller, owner, 144 State street, Albany, N. Y.

TOWN OF COLONIE

Population 9,989

No. 5.— Farm of 204 acres; located 3 miles from Troy and Watervliet, on line of D. & H. R. R.; ½ mile from school and 2 miles from church. Highways, good. Nearest city, Troy, population, 75,488, 3 miles distant, reached by trolley. General surface, rolling and level. Acres than can be used as meadow, 204; in natural pasture, 20; in timber, 7, chestnut, pine and maple. Acres tillable, 204. Fruit, 300 apple, 390 plum, pear trees, also a large number of cherry trees. Land adapted to any kind of crops. Fences, all in first class condition. 3 houses, 1 of 14 rooms; 1 tenant house; 1 of 15 rooms with 10 clothes presses, hardwood floors, hot water heat and in excellent condition. Barn, 85x40, 3 smaller barns. House and barns watered by well; windmill supplies both farms. Within short distance of Helderbergs, Mohawk and Hudson rivers. Occupied by 2 tenants. Reason for selling, old age. Price $20,000. Terms easy. Address Henry Miller, owner, 43 So. Lake avenue, Albany, N. Y.

No. 6.— Farm of 22 acres; located at Lathams, on line of D. & H. R. R.; about ⅛ mile from school and church. Highways, state road. Nearest city, Watervliet, population, 14,990, reached by rail. General surface of farm, level. Nature of soil, dark loam. Acres in meadow, all. Acres tillable, all. Fruit, variety, berries and two beds of asparagus. Best adapted to hay and grain. Fences, wire. House, 2 stories and basement; 10 rooms, steam heat, electric lights and bath. Outbuildings, barn 40x60; large shed, wagon house, poultry house, corn crib and 2 greenhouses. Watered, house, by tank in barn. Occupied by owner. Reason for selling, other business. Price, $10,000. Terms, ½ cash, balance on mortgage. Address S. Dedrick, owner, Watervliet, N. Y., R. D.

No. 7.— Farm of 60 acres; located 2½ miles from Albany postoffice and railway station on lines of several railroads; ½ mile from school; 1 mile from churches of all denominations. Good highways. Nearest city, Albany, population 107,979, distant 2½ miles, reached by highway. General surface of farm, level. Altitude, 200 feet. Nature of soil and loam. Acres than can be used as meadow, 45; number now so used, 12; in timber, 2; number tillable, 45. Two apple trees. Best adapted to gardening. Fences, good and fair. House of 8 rooms in fair condition. Plenty of barn room for farm. House and barn watered by wells; fields by well and springs. Farm now occupied by tenant. Price, $7,500. Terms, $250 per year. Will rent for cash with option to buy. Half acre of asparagus on farm. Address Elsie L. Pepper, 31 Clinton Ave., Albany, N. Y.

TOWN OF GUILDERLAND

Population 3,690

No. 8.— Farm of 115 acres; located ½ mile from Altamont P. O., R. D. No. 3, and railway station, on line of D. & H. R. R.; ½ mile from school; ½ mile from churches. Highways, macadamized road, good condition. General surface, mostly level, some slightly rolling. Na-

There are Millions of Acres in New York State Adapted to Live Stock and General Farming at $25 to $60 Per Acre.

ture of soil, black and gravelly loam. Acres that can be used as meadow, 95; in natural pasture, 5; in timber, 15; pine, hemlock, oak, maple and beech. Acres tillable, 100. Fruit, 100 apple, 40 prune, 50 pear, plum, peach, apricot and cherry trees; 500 plants of red raspberries and black raspberries, currants and gooseberries for home use. Best adapted to fruit, grain and hay. Fences, mostly wire. House, 15 rooms, also tenant house of 9 rooms, good condition. Outbuildings, large barn, ice house, poultry house, hog house, corn house, milk house, good condition; new roofs on barn, shed and wagon house. House watered by spring, also water in kitchen, barns by spring, fields by spring in pasture. Occupied by owner. Reason for selling, old age. Price, $8,000. Terms, cash. Will sell stock and tools, if desired. Milk collected at door. Address, Henry Ellis, owner, Altamont, N. Y., R. D. No. 3.

No. 9.— Farm of 81 acres; located ½ mile from Guilderland Center P. O.; ¾ mile from railway station at Guilderland Center, on line of West Shore Ry.; ¼ mile from school and churches; ¼ mile from milk station. Highways, macadamized, good. Nearest cities, Albany, 11 miles distant, population, 107,979, and Schenectady, 8 miles distant, population, 80,381, reached by rail and highway. Surface of farm, level. Soil, gravelly, good. Acres that can be used as meadow, 48; acres tillable, 81. Fruit, 900 apple trees. Best adapted to grain, corn and hay. Fences, wire and board, good. House, 30x40, 13 rooms, good. Outbuildings, barn, 38x52; wagon house and horse stable, 24x48; carriage house, 10x24; shed, 20x38; poultry and hog house, 14x32; cow stable, 18x32; ice house and cream room, 14x20, good. Watered, house by well and cistern; barns, by two large cisterns; fields, by well. This farm is 3 miles from Helderbergs, 6 miles from Thompson's and Warner's Lakes, ½ mile from the Normanskill and 11 miles from Hudson river. Occupied by tenant. Reason for selling, owner has other business. Price, $9,000. Terms, $3,000 cash. Address Ira Hurst, owner, Guilderland Center, N. Y.

No. 10.— Farm of 64 acres; located 1½ miles from Guilderland Center; 2½ miles from Voorheesville on line of D. & H. R. R.; ½ mile from school; 1½ mile from churches. Milk collected at door. Highways ½ state and ½ dirt road. Nearest city, Albany, population, 107,979, 11 miles distant, reached by highway. General surface, nearly level. Nature of soil, heavy black and some stony. Acres that can be used as meadow, 58; in timber, 6, second growth and some hemlock and pine. Acres tillable, 58. Fruit, 110 apple, 15 pear, 15 plum and 35 cherry trees, also some strawberries. Adapted to rye, oats, corn, buckwheat and beans. Fences, plain and barbed wire, in good condition. House, 8 rooms, in fair condition. Two barns, 36x24, shed, 12x24, tile silo, 12x36, modern poultry house, 16x60, and brooder house, 13x15. Watered, house, by wells and cistern; barns, by well, fields, by springs. Occupied by owner. Price, $3,750. Terms, $1,750 cash and $2,000 on bond or mortgage. Address, William B. Messer, Voorheesville, N. Y. Will rent.

No. 11.— Farm of 80 acres; located ½ mile from Altamont on line of D. & H. R. R.; ½ mile from school and churches. Highways, state road. Nearest city, Schenectady, population, 80,381, 9 miles distant. General surface, rolling. Nature of soil, gravel and loam. Acres in natural pasture, 4; in timber, 8; oak, hemlock, beech and maple. Acres tillable, 65. Fruit, 200 apple, 50 pear, 40 cherry and 10 plum trees. Adapted to corn, oats, rye, wheat and potatoes. Fences, wire and stone. House, 8 rooms, 36x22; kitchen, 18x20, in good condition. Outbuildings, barn, 40x50, with shed, 20x40, attached, and hog house; 18x20. Watered, house by wells; barn, by running spring; and fields, by creek and springs. Occupied by owner. Price, $5,000. Terms, ½ cash and remainder on mortgage. Address, W. E. Armstrong, Altamont, N. Y.

No. 12.— Farm of 51 acres; located ¼ mile from railway station at Altamont, on line of D. & H. R. R.; ¼ mile from churches. Highways, state road. Nearest city, Albany, population 107,979, 14 miles distant. Reached by railway. General surface, level. Nature of soil, gravel loam. Acres tillable, 50. Fruit, 150 apple, 400 pear trees and 1,000 currant, 1,200 red raspberry and 50 blackberry bushes. Adapted to rye, oats, wheat and hay. Fences, wire. House, large. Outbuildings, barns, 30x40 and 36x40;

poultry house, 18x40; hog house, 12x18, and corn crib, 12x12. Watered, house, barn and fields by well. Occupied by owner. Reason for selling, other business. Price, $8,000. Terms, ½ cash and remainder on mortgage. Address, F. Saddlemire, Altamont, N. Y.

No. 13.— Farm of 98 acres; located 1 mile from Altamont, on line of D. & H. R. R.; 1 mile from school, churches and milk station. Highways, level but rough. Nearest village, Altamont, population 805, 1 mile distant. General surface, rolling to level. Altitude 445 feet. Nature of soil, gravelly and clay loam. Acres that can be used as meadow, 75; in natural pasture, 3; in timber, 18, mixed second growth. Acres tillable, 75. Fruit, 700 pear, 200 apple and 540 peach trees. House, in fair condition, 24x30, with kitchen, 14x16. Outbuildings, hay barn with one story wagon house, 45x56; horse stable, 24x30; hay barn, 30x40. House watered by well; barns, by two wells; fields, by springs. Near Helderberg Mountains. Occupied by owner. Price, $7,800. Terms, cash, might take mortgage from good party. Address, O. V. Crounse, owner, Altamount, N. Y.

No. 14.— Farm of 40 acres; located 2 miles from Altamont postoffice, R. D. No. 3; 1½ miles from railway station at Meadowdale, on line of D. & H. R. R.; ¾ mile from school; 2 miles from churches; 1½ miles from milk station. Good highways. Nearest city, Schenectady, population 80,381, distant 11 miles, reached by rail and highway. General surface of farm, level, but drains well. Altitude, 400 feet. Smooth black soil and yellow loam. Acres that can be used as meadow, 35; in timber 5, beech, hemlock, basswood and a little pine. Acres tillable, 35. Fruit, 25 apple trees and a few cherry, pear and plum. Best adapted to hay, rye, barley, oats and corn. Wire and rail fences. House of 11 rooms, in good condition. Barn 24x30; wagon house 24x30; shed 18x30; pig sty 16x18; hen house 12x12; all in good condition. House and barns watered by wells; fields, by brook. Helderbergs, ½ mile distant. Farm now unoccupied. reason for selling, owner has other property. Price, $3.000. Terms, half cash. Address William Van Auken, Delanson, N. Y., R. D. 3.

No. 15.— Farm of 76 acres: located 1 mile from Guilderland P. O.; ¾ mile from Guilderland Center, on line of West Shore R. R.; 1 mile from school, churches and milk station. Highways, good. Nearest city, Albany, population 107,979, 11 miles distant, reached by rail and highway. General surface, rolling and level. Nature of soil, clay loam and gravel. Acres used as meadow, 66; in natural pasture, 6; in timber, 4, pine, hemlock and oak. Acres tillable, 66. Fruit, 175 apple trees and some small fruit. Best adapted to corn, oats, rye and hay. Fences, wire, in fair condition. House, 9 rooms, in good condition. Outbuildings, barn, 43x51, in good condition; 2 wagon houses, in good condition; poultry house, 12x30, and hog house. Watered, house, by cistern; fields, by creek. Occupied by owner. Reason for selling, illness in family. Price, $5,000, ½ cash and remainder on mortgage. Address, William Spoor, owner, Altamont, N. Y., R. D. 3.

No. 16.— Farm of 152½ acres; located 2 miles from postoffice at Voorheesville, R. D. No. 1; 2 miles from railway station at Voorheesville, on lines of D. & H. and W. S. R. Rs.; ¾ mile from school; 2 miles from churches and milk station. Highways, good earth road. Nearest city, Albany, population 107,979, distant 12 miles, reached by rail and highway. General surface of farm, rolling and level. Altitude, about 350 feet. Clay loam and black soil. Acres that can be used as meadow, about 140; acres now used as meadow, 75; in natural pasture, about 9; in timber, 5, pine, hemlock, oak and ash principally. Fruit trees, 200 apple; 70 pear; 70 plum; cherry. Best adapted to hay, rye, oats, corn, buckwheat and wheat. Mostly wire fences in fair condition. Large double house in fine condition. Barn, 50x50; one building, 25x60; hay barn, 40x35; large wagon house; 2 horse stables, cow stable, corn house; hog house, 2 poultry houses. House and barns watered by wells and cisterns; fields, by wells and pond. Farm now occupied by tenant. Reason for selling, other business. Price, $7,000. Terms, half cash, balance, mortgage. Will rent on shares. Address Newton J. Fryer, owner, Guilderland Center, N. Y.

No. 17.— Farm of 114 acres; located 1 mile from postoffice, R. D. No. 3, and railway station at Altamont, on line of D. & H. R. R.; 1 mile from school, churches and milk station. Good highways. Nearest village, Altamont, population 805, reached by rail or highway.

Surface of farm, level. Altitude, 380 feet. Nature of soil, gravelly loam. All can be used as meadow; acres in natural pasture, 4 or 5; acres tillable, 92. Fruit, 75 apple trees. Best adapted to rye, oats, corn, hay and potatoes. Wire fences in fair condition. House of 12 rooms, painted, in fair condition. Large barn, shed and henhouse attached; wagon house and horse stable combined; carriage house; large wood house; brick smoke house; hog-pen; shop. House watered by wells and spring; barn by well and spring. Farm situated at foot of Helderbergs. Farm now occupied by tenant. Reason for selling, poor health. Price, $5,500. Terms, cash preferred. Will rent with option to buy, or on shares. Address David Blessing, Altamont, N. Y.

TOWN OF KNOX

Population 1,101

No. 18.— Farm of 170 acres; located 1¼ miles from Knox P. O., R. D. 1; 5 miles from railway station at Altamont, on line of D. & H. R. R.; 1¼ miles from school and churches; 3 miles from milk station. Highway, state road. Surface of farm, part rolling, sloping to east. Soil, fertile loam. Acres in meadow, 160; in timber, 10, pine, hemlock, elm and ash. Acres tillable, 160. Fruit, 50 apple, 12 pear, 15 plum and 5 cherry trees; also currants, berries and grapes. Best adapted to hay, oats, buckwheat, corn and potatoes. Fences, stone and wire, good condition. House, 46x24; wash house and wood house, 20x24. Outbuildings, barn, 40x46, shed attached, 24x46; barn, 22x70, with 5 stalls for horses; wagon house, 24x60; sheep house, 20x30; ice house, 20x16; hog house, 16x24; machine house, 26x36; poultry house, 16x24. Watered, house by well and cistern, barns by well, fields by never-failing spring. This farm is 5 miles from Thompson's and Warner's lakes. Occupied by tenant. Reason for selling, ill health of owner. Price, $6,000. Terms, cash or part cash and remainder on easy terms. Address Amaziah Saddlemire, owner, Knox, N. Y., Box 33.

No. 19.— Farm of 180 acres; located 4 miles from Berne P. O., R. D. 1; 7 miles from railway station at Altamont, on line of D. & H. R. R.; ½ mile from school; 2¼ miles from churches; 4 miles from butter factory and milk station. Highways, good. Nearest large village, Altamont, population 805, 7 miles distant, reached by state road. Surface of farm, mostly level. Soil, fertile loam. Acres in meadow, 150; in timber, 30, pine, hemlock, beech and maple. Acres tillable, 150. Fruit, 40 apple, 6 pear, and plum trees. Adapted to hay, oats, buckwheat, corn, potatoes and hops. Fences, stone and wire. House, 32x24, with kitchen and wood house attached, 20x20, good condition. Outbuildings, good barn, 32x46; barn, 32x50; cow barn, 32x40; wagon house, 20x26; hop house, 20x44; hog house, 16x20. Watered, house by cistern and well, barns by creek and well, fields by creek and spring. Occupied by tenant. This farm is 6 miles from Thompson's and Warner's lakes. Reason for selling, ill health of owner. Price, $5,000. Terms, cash or part cash. Address Amaziah Saddlemire, owner, Knox, N. Y., Box 33. Owner will rent.

No. 20.— Farm of 101 acres; located 5 miles from postoffice at Delanson, R. D. No. 3; 5 miles from railway station at Altamont, on line of D. & H. R. R.; 1½ miles from school and church; 5 miles from butter factory and milk station. Good highways. Nearest city, Schenectady, population 80,381, distant 14 miles, reached by rail and highway. General surface of farm, level, but slopes enough to drain well. Altitude, 1,100 feet. Soil is mostly a good black loam. Acres that can be used as meadow, 83; acres now used as meadow, 40; in natural pasture, 10; in timber, 8, beech, hemlock and basswood, enough for home use. Acres tillable, 83. Fruit trees, 30 apple; 10 pear; 10 plum. Best adapted to buckwheat, oats, corn, hay and potatoes. Stone wall and wire fences. House of 14 rooms, 18x48, wing, 18x36, condition, good. Barn and shed attached, 30x100; barn, 30x42; wagon house, 24x32; pig sty, 16x24; hen house, 12x16. House watered by well piped to house; barn by well; fields by brook, spring and pond. Farm now occupied by owner. Reason for selling, owner has other property. Price, $3,000. Terms, half cash. Farm is equipped for sheep or other stock and is an unusually good farm for buckwheat or other grains. Address William Van Auken, owner, Delanson, N. Y., R. 3.

TOWN OF NEW SCOTLAND

Population 2,924

No. 21.— Farm of 35 acres; located 4 miles from railway station at Voorheesville, on line of D. & H. and W. S. R. R.; 2 miles from New Scotland, on line of W. S. R. R.; P. O., Delmar R. D. No. 1; ¼ mile from school and 3 miles from churches. Highways, good. Nearest city, Albany, population 107,979, 11 miles distant, reached by rail or highway. General surface of farm, hilly; fields, level and rolling. Altitude, 500 feet. Nature of soil, limestone and loam. Acres. tillable, 7. Fruit, 17 apple, 17 pear, 110 plum, 4 peach, 6 cherry trees and 4 grape vines. Best adapted to poultry, small fruit and gardening. Fences, wire, poor condition. House, 7 rooms, good condition, but needs painting. Outbuildings, barn, 20x24, fair condition; hog pen, good condition; 2 poultry houses, new, 10x20 and 8x8. Watered, house, by well and cistern. Occupied by owner. Reason for selling, ill health. Price, $1,000. Terms, cash. Medium sized hemlock and pine timber on farm, saw and planing mill at New Scotland. Address, E. N. Crane, Delmar, N. Y., R. D. No. 1.

No. 22.— Farm of 235 acres; located 2 miles from Feura Bush, on line of West Shore R. R.; ¼ mile from school; 1½ miles from church and 2 miles from butter factory. Highways, state road. Nearest city, Albany, population, 107,979; 11 miles distant, reached by highway. General surface of farm, partly level. Nature of soil, sandy and clay loam. Acres in natural pasture, 10; in timber, 25, maple, hickory, pine and hemlock. Adapted to hay, rye, wheat and buckwheat. Fences, board, pole and wire, poor condition. House, 12 large rooms. Outbuildings, barn, 40x80; barn, 40x40; wagon house, 18x24; shed, 24x40; corn crib; pig pen; shop and cider house, 24x30. Watered, house, by well; barns, by creek; and fields, by spring and creek. At foot of Helderberg Mountains. Occupied by tenant. Reason for selling, to settle estate. Price, $12,000. Terms, $6,000 cash, balance on mortgage. Address, C. S. Shear, owner, Ravena, N. Y., R. D.

No. 23.— Farm of 105 acres; located 1 mile from Voorheesville, on line of D. & H. R. R.; 1 mile from school, churches and milk station. Highways, good. Nearest city, Albany, population, 107,979, 12 miles distant, reached by rail and state road. General surface, rolling. Altitude, 500 feet. Nature of soil, clay and gravel. Acres that can be used as meadow, 60; in natural pasture, 12; in timber, 10, oak, hemlock and pine. Acres tillable, 80. Fruit, 20 acres of apples, all varieties. Best adapted to rye, wheat, and oats. Wire fences in fair condition. House, 1½ stories, 10 rooms, fair condition. Outbuildings, main barn, 44x82x16, good condition; wagon shed and cow stable, 24x80x16. Watered, house and barns, by well; fields, by spring; 3 miles from Helderberg Mountains; 6 miles from Thompson's and Warner's lakes. Occupied by owner. Reason for selling, old age. Price, $15,000. Terms, $5,000 cash, balance on mortgage. Address, Mynard Defreest, owner, Voorheesville, N. Y.

No. 24.— Farm of 172 acres; located 4 miles from Altamont; 1 mile from railway station at Meadowdale, on line of D. & H. R. R.; ¼ mile from school; 2 miles from churches; 1 mile from milk station. Nature of highways, dirt and state road. Nearest city, Albany, population, 107,979, 12 miles distant, reached by rail and highway. General surface, level, part rolling. Nature of soil, gravel and black loam. Acres that can be used as meadow, 160; in timber, 12, pine, elm, maple and some chestnut. Acres tillable, 160. Fruit, about 400 apple and 100 pear trees; few cherries and plums. Best adapted to rye, oats and corn. Fences, fair condition. House, 10 rooms, fine condition. Outbuildings, 2 barns, wagon house, stable, cow barn and shed, tool house, poultry house and hog house, all good condition. House and barn watered by well and cistern; fields, by springs, brooks and wells; 1 mile from Helderberg Mountains. Occupied by owner. Reason for selling, old age. Price, $7,500. Terms, will leave part on mortgage. Address, Andrew Smith, owner, Altamont, N. Y., R. D. No. 3.

No. 25.— Farm of 84 acres; located ¾ mile from Voorheesville, on line of D. & H. and W. S. R. Rs.; 1 mile from school, churches and milk station. Highways, good. Nearest city, Albany, population, 107,979, 11 miles distant, reached by rail and highway. General surface, rolling. Altitude, 250 feet. Nature of soil, sandy loam and clay. Acres that can be used as meadow, all; in natural pasture, 5; in timber, 2, oak and pine. Acres tillable, nearly all. Fruit, a few apple trees. Best adapted to hay, oats and rye. Wire fences, fairly good. House and barns watered by well; fields, by

LEBANON VALLEY — SHAKERS SETTLEMENT IN DISTANCE.

creek; 3 miles from Helderberg Mountains and Thompson's Lake. Occupied by tenant. Reason for selling, retired farmer. Price, $4,000. Terms, cash. Address, Adam B. Relyea, owner, Voorheesville, N. Y.

No. 26.— Farm of 75 acres; located 1½ miles from Voorheesville; P. O., R. D. No. 3; 1½ miles from railway station at Voorheesville, on line of D. & H. and W. S. R. Rs.; ½ mile from school, 1 mile from Methodist and Presbyterian churches; 1½ miles from milk station. Highways, state road, ½ mile distant. Nearest city, Albany, population 107,979, 11 miles distant, reached by railway and state roads. General surface of farm, rolling. Altitude, 567 feet. Nature of soil, clay, loam, few stones. Acres in timber, 8, oak, pine and hickory. Acres tillable, 67. Fruit trees, 100 apples just coming into bearing, all kinds of small fruits. Adapted to corn, oats, rye, hay, buckwheat. Fences, wire, in good condition. House, 12 rooms, in fine condition. Barns, 30x45, 20 ft. posts, painted, gambrel roof; 30x40, 18 ft. posts; tool house, 35x22; pig pen and corn house 18x20; shop, 18x20; poultry house, 18x20, good condition. House watered by well and cistern, barn by well, fields by streams and springs. Helderbergs, 1½ miles distant. Occupied by owner. Reason for selling, wants to change occupation. Price, $7,500. Terms, one-third down, balance, mortgage. Beautiful view of surrounding country; telephone, electric lights and city water. Address Frank Van Auken, owner, Voorheesville, N. Y.

TOWN OF RENSSELAERVILLE

Population 1,619

No. 27.— Farm of 187 acres, 2 miles from Preston Hollow and 14 miles from Middleburg, population, 1,059; 2 miles from school and churches. Roads in the vicinity, good. Nature of soil, sand and gravelly loam; 30 acres of meadow; 40 acres of natural pasture; 30 acres of timber; about 100 acres tillable. Fruit, orchard of 30 trees. Adapted to all kinds of crops. Altitude, 1,500 feet. Fences, stone, in poor condition. House, 30x40, 2 stories, needs painting. Barn, 30x40, 2 stories. Wagon house and sheep barn. Premises watered by springs. Catskill Mountains, 12 miles distant. Reason for selling, poor health of the owner. Price, $2,000. Terms, half cash. Name and address of owner, J. M. Watson, Preston Hollow, N. Y.

No. 28.— Farm of 135 acres; located 2¼ miles from Rensselaerville P. O.; 17 miles from railway station at Voorheesville, on line of D. & H. and West Shore Railroads; ¾ mile from school; 2¼ miles from churches and butter factory. Highways, level and good. General surface of farm, part level and part rolling, facing east. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 80; in natural pasture, 20; in timber, 18; beech, maple, ash and hemlock. Acres tillable, 95. Fruit, apples, about 65 trees. Adapted to oats, corn, potatoes, buckwheat and rye. Fences, stone wall and wire, good condition. House, 22x44, kitchen and wood house attached, fair condition. Old-fashioned fire place in house. Outbuildings: barn, 22x44; shed, hog house, barn, 22x40; barn, 30x50, cow stable attached; wagon house. House watered by well; barns by never failing stream, and fields by brook and streams. Lake Myosotis, 2½ miles and Crystal Lake, 5 miles distant. Occupied by owner. Reason for selling, other business. Price, $1,800. Terms, half cash. This property is ¾ mile from road, auto bus runs from Rensselaerville to Albany. Rural delivery passes door. House is newly painted and roofed. Address M. S. Lasher, owner, R. D., Berne, N. Y.

No. 29.— Farm of 160 acres; located 2 miles from Medusa P. O., R. F. D. 1; 12 miles from railway station at Cairo; ⅛ mile from school; 2 miles from butter factory and Protestant churches. Highways, good, somewhat rolling. Nearest city, Albany, 24 miles distant, population, 107,979, reached by auto bus. Surface of farm, rolling. Soil, loam. Acres in meadow, 35; in natural pasture, 25; in timber, 40; good hemlock and hardwood; acres tillable, 85. Fruit, 200 apple, 20 pear, 20 peach, 20 cherry and 20 plum trees. Adapted to corn, oats, rye and buckwheat. Fences, stone wall and wire. House, 2 stories, 14 rooms, good condition. Outbuildings: barn, 34x46, 2 stories, with wing, 18x24; barn, 30x40, with wing, 16x30; wagon house and stable, 30x50; hog and poultry house. Watered, house, by running water and well; barn, by running water and spring; fields, by brook and springs. This farm is 5 miles from Catskill Mountain and Crystal Lake. Occupied by owner. Reason for selling, owner cannot do the work. Price, $3,600. Terms, cash. Address W. A. Mackey, owner, Medusa, N. Y., R. D. No. 1, Box 42.

No. 30— Farm of 166 acres; located 2 miles from Medusa and 5 miles from Greenville P. O., R. D. 1; 12 miles from railway station at Cairo, on Catskill Mountain R. R., and 17 miles from West Coxsackie or Ravena, on West Shore R. R.; 1 mile from school; 1 mile from Methodist church; 2 to 5 miles to churches of other denominations; 2 miles from butter factory. Roads, good. State roads from Greenville to Coxsackie and from Rensselaerville to Albany. Nearest city, Albany, population, 107,979, distant 30 miles, reached by highway or rail from West Coxsackie. Surface, rolling. Altitude, 1,000 feet. Soil is good clay loam. Twenty acres of meadow; 25 acres of natural pasture; about 35 acres of timber, hemlock, maple, beech, white ash, elm, basswood, etc.; acres tillable, 86. There is an old neglected apple orchard of about 3 acres, Newtown Pippins, also a good many younger apple trees, some of which have been grafted while others need topworking and pruning, also a few pear trees. Land is adapted to dairying, fruit and all general farm crops. Fences, stone wall and new wire. There is a good 2-story house, 26x36, and extensions, 16x30, with excellent cellar; barn, 30x40, with 30-foot extension, stanchions for 14 head of cattle; barn, 26x60, with 20-foot posts, stalls and carriage room; 2-story grain house, 18x26; 2 poultry houses, 8x15 and 15x18. Buildings, good condition. House has well and cistern. Barns have wells. Fields have springs, and are also watered by the Eight Mile Creek, running through northwest portion of farm. Occupied by tenant. Reason for selling, old age of owner. Price and photograph on application. Terms, cash or half cash, with balance on mortgage at 5%. Only 2 miles to one of the best creameries in the state, saw and grist-mills. Address, Eugene Spalding, owner, Greenville, Greene County, N. Y.

No. 31.— Farm of 175 acres; located 2 miles from Potter Hollow P. O.; 14 miles from railway station at Middleburg, on line of M. & S. R. R.; 2 miles from school and churches; 2 miles from butter factory. Highways, hilly, but good. Nearest village, Middleburg, population, 1,059, 14 miles distant, reached by highway. General surface, rolling. Altitude, 1,500 feet. Nature of soil, gravelly. Acres that can be used as meadow, 60; in natural pasture, 80; in timber, 35, pine, hemlock, ash, oak, beech and maple. Acres tillable, 130. Fruit, about 75 apple, 6 pear, 25 plum and 10 cherry trees. Adapted to corn, wheat, rye, oats and buckwheat. Fences, wire, rail and stone wall, fair condition. House, 30x50, 1½ stories, fair condition. Barn, 30x40; barn, 24x50; barn and shed, 30x40; all in fair condition. Watered, house, barn and fields, by springs. Reason for selling, to close estate. Price, $3,000. Terms, ½ cash, balance on mortgage. Address, Edward D. Cook, owner, Potter Hollow, N. Y.

No. 32.— Farm of 192 acres; located 4 miles from Preston Hollow; 12 miles from railway station at Middleburg, on line of M. & S. R. R.; short distance from school; 4 miles from churches and butter factory. Highways, hilly, but good. Nearest city, Albany, population, 107,979, 32 miles distant, reached by state road, except 4 miles. Altitude, 1,200 feet. Nature of soil, clay subsoil, very productive. Acres that can be used as meadow, 75; in natural pasture, 75 or 80; in timber, 30, hemlock, ash, oak, beech, maple and basswood. Acres tillable, 150. Fruit, 200 apple, 40 pear, 8 cherry and 12 plum trees. Adapted to general farm crops. Fences, stone wall and wire, good condition. Ten-room house, nearly new. Outbuildings, barn, 28x52, 14-foot posts; barn, 24x40, 14-foot posts; horse barn, 28x30, 16-foot posts; 3 poultry houses, hog house and other sheds, all in good condition. House watered by cistern and well; barns, by brook in yard; fields, by living springs. Three miles from Crystal Lake. Occupied by owner. Reason for selling, failing health. Price, $3,000. Terms, $2,000 cash, balance on mortgage. Address, Adelbert E. White, owner, Preston Hollow, N. Y., Box 71.

TOWN OF WESTERLO

Population 1,263

No. 33.— Farm of 155 acres; located 1½ miles from South Berne P. O.; 12 miles from railway station at Voorheesville, on line of D. & H. R. R.; ½ mile from school; 1½ miles from churches; 1½ miles from butter factory. Highways, good. Nearest city, Albany, population, 107,979, 24 miles distant, reached by highway. General surface of farm, level and rolling. Altitude, 1,200 feet. Nature of soil, clay loam. Acres in pasture, 20; in timber, 8, second growth, maple, ash, beech and hickory. Acres tillable, 140. Fruit, small apple orchard. Adapted to hay, oats, barley, rye, buckwheat and corn. Fences, rail and wire. House, 8 rooms, wood house and kitchen. Outbuildings, wagon house and stable, 18x32x14; barn, 34x58x12; hog house, 16x20; small poultry house. House, barn and fields watered by wells and springs. Occupied by tenant. Reason for selling, old age. Price, $20 per acre. Terms, ⅓ cash. Address, John W. Hays, owner, Brookview, N. Y. Will rent.

No. 34.— Farm of 150 acres; located on R. F. D.; 14 miles from railway station at Ravena on line of W. S. R. R.; ½ mile from school; 1½ miles from butter factory and Protestant churches. Highways, good. Nearest city, Albany, population, 107,979, 20 miles distant, reached by state road. Surface of farm, rolling and level. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 124; in natural pasture, 16; in timber, 10; beech, maple, hemlock, good; acres tillable, 124. Fruit, 200 apple, 25 pear trees, also cherries and plums. Adapted to corn, oats, rye, buckwheat and hay. Fences, woven wire and barbed wire, good. House, 8 rooms, 1½ stories, woodshed attached. Outbuildings; barn, 24x40; barn, 20x50; barn, 30x60, good condition; also poultry house, 12x16, and hog pen, 12x16; good condition. Watered, house, by well; barns, by well and creek; fields, by springs and creeks. Occupied by tenant. Reason for selling, poor health of owner. Price, $2,200. Terms, easy. Address Fred Winegard, owner, Westerlo, N. Y.

No. 35.— Farm of 185 acres; located 2 miles from South Westerlo P. O.; 14 miles from railway station at Ravena, on line of W. S. R. R.; 1 mile from school and church; 2 miles from butter factory. Highways, somewhat hilly but good. Nearest city, Albany, population, 107,979, 25 miles distant, reached by highway or rail from Ravena. Surface of farm, nearly level, southern exposure. Altitude, about 1,500 feet. Soil, clay sub-soil. Acres in meadow, 125; in natural pasture, 35; in timber, 25, variety, mostly hemlock; all tillable, except woodland. Fruit, apples, pears, grapes, plums, etc. Adapted to hay, oats, buckwheat, corn and potatoes. Fences, stone and wire, fair condition. Large house in good condition. Outbuildings, good sized barns, which need some repairs, new poultry house, with well fenced yards. Watered, house and barn, by running water; fields, by springs. Occupied by tenant. Reason for selling, owner a widow and cannot attend to farm. This is a fine dairy farm. Price, $3,800. Terms, part cash, remainder on mortgage. Auto bus runs from So. Westerlo to Albany. Address Emily R. Wickes, owner, South Westerlo, N. Y. Owner will rent for money or on shares, with option to buy.

No. 36.— Farm of 75 acres; located 1 mile from Westerlo P. O., R. D. 1; 15 miles from railway station at Ravena, on line of West Shore R. R.; 1 mile from school and churches; 1 mile from butter factory. Highways, good. Nearest city, Albany, population, 107,979, 20 miles distant, reached by state road and rail. General surface, rolling. Altitude, 1,000 feet. Nature of soil, gravel loam. Acres in timber, 20, pine, hemlock and ash; acres tillable, 50. Fruit, 75 apple trees. Adapted to hay, rye, oats corn and buckwheat. Fences, stone, fair condition. House, 20x30; wing, 20x30. Outbuildings: barns, 30x40 and 20x30; shed, 16x20; hog house, 12x20. House watered by well and cistern; barns, by well; fields, by creek and springs. Occupied by tenant. Reason for selling, to close an estate. Price, $1,800. Terms, $900 cash. Address, B. T. Briggs, administrator, Alcove, N. Y. Owner will rent.

No. 37.— Farm of 128 acres; located 2 miles from Westerlo P. O., R. D. 1; 16 miles from railway station at Ravena, on line of West Shore R. R.; school on farm; 2 miles from churches; 2 miles from cheese factory. Highways, good. Nearest city, Albany, 20 miles distant, population, 107,979, reached by rail and state road. General surface, rolling. Altitude, 1,000 feet. Nature of soil, black and clay loam. Acres in meadow, 35; in timber, 12, hemlock, pine and ash; acres tillable, 100. Fruit, about 25 apple trees. Best adapted to rye, oats, corn and hay. Fences, stone, fair condition. House, 20x30, 1½ stories. Outbuildings: barn, 42x54, 2 floors; barn, 20x60; shed, 16x70. House watered by well; barns, by springs; fields, by creek. Occupied by tenant. Reason for selling, to close an estate. Price, $3,000. Terms, $1,000 cash, balance on mortgage. Address, B. T. Briggs, administrator, Alcove, N. Y.

No. 38.— **Farm of 114½ acres; located** ½ mile from South Westerlo P. O., R. D 1; 13½ miles from railway station at Ravena, on line of West Shore R. R.; ½ mile from school, churches and butter factory. Nearest city, Albany, population, 107,979, 23½ miles distant, reached by highway. Highway, state road. Altitude, 500 feet. General surface, rolling. Acres in meadow, 85; in pasture, 30; in timber, 5, hemlock and hardwood. Acres tillable, 90. Fruit, 50 apple trees, varieties. Adapted to general farm crops. Fences, wire and stone, fair condition. House, new, 8 rooms. Barn, 50 feet long, good condition. House watered by well, barn by well and spring, fields by brook. Occupied by owner. Reason for selling, has other farm. Price, $2,500. Terms, $1,500, balance on mortgage. Address, Louis W. Reynolds, owner, South Westerlo, N. Y.

No. 39.— **Farm of 80 acres; located 2 miles from Dormansville P. O., R. D.** 1; 13 miles (state road) from railway station at Ravena, on line of W. S. R. R.; 1 mile from school; 2 miles from churches, and 2½ miles from butter factory. Highways, good. Nearest city, Albany, population, 107,979, 16 miles distant, reached by highway. General surface, mostly level. Altitude, 1,200 feet. Good strong soil, clay subsoil. Acres that can be used as meadow, 65; in natural pasture, 10; in timber, 5, beech, maple, hickory and basswood. Acres tillable, 70. Fruit, 160 apple, 14 pear and some plum trees. Best adapted to hay and grain. Fences, wire and stone wall, fair condition. House, 14 rooms, 28x40; wing, 13x16; ell, 22x30, good condition. Outbuildings, barn, 30x40; shed, 20x40; shed, 20x38; good stables; silo, 12x24; horse barn, 30x50; 4 poultry houses, 18x18, 14x16, 12x12 and 12x12, all in good condition, newly painted. House watered by well, barns by well, fields by springs. Occupied by owner. Reason for selling, owner wishes to retire. Price, $3,500. Terms, ½ cash, balance on mortgage. Address, E. J. Hunt, owner, Dormansville, N. Y.

No. 40.— **Farm of 270 acres; located 4 miles from Greenville; 10 miles from Ravena, on line of West Shore R. R.;** ½ mile from school; 3 miles from churches; 4 miles from butter factory. Highways, good dirt road. Nearest village, Greenville, 4 miles distant, reached by highway. General surface, rolling. Acres in natural pasture, 25; in timber, 50, hickory and some other hard wood. Acres tillable, 200. Fruit, 950 apple trees. Adapted to corn, oats, rye, wheat and buckwheat. Fences, stone and wire, in fair condition. House, 3 stories, stone, 30x30. Outbuildings, 2 barns, 34x40; shed, 18x70; cow stable, 20x16; hog house, 14x18; poultry house, 13x30; corn house, 12x16; also tenant house and barn. Watered, house and barns, by springs; fields, by running water. Reason for selling, desires to retire. Price, $10,000. Terms: cash preferred but other arrangements can be made. Address, N. D. Cunningham, Greenville, N. Y. Owner will rent.

No. 41.— **Farm of 170 acres; located 3 miles from Westerlo; 15 miles from railway station at Voorheesville, on line of D. & H. and West Shore R. Rs.;** ½ mile from school, 3 miles from churches, Baptist and Presbyterian; 3 miles from butter factory; ½ mile from state road. Nearest city, Albany, population, 107,979, distant 20 miles, reached by both rail and highway. General surface of farm, rolling and level. Altitude, 1,400 feet. Soil, stony loam. Acres that can be used as meadow, 25; in natural pasture, 70; in timber, 40; maple, beech, ash and hemlock. Acres tillable, 60. Fair sized orchard, consisting of apple, pear, plum and cherry trees. Adapted to oats, buckwheat, barley, rye, corn and potatoes. Fences, stone and wire, in fair condition. House, 10 room frame, fair condition but needs repairing. Main barn, 38x50 feet; wagon house, 24x60: hog house. House and barns watered by well, fields by creek. 3 miles from Myosotis lake. Occupied by tenant. Reason for selling, other business. Price, $1,600. Terms, one-half down, remainder on mortgage. Will rent with option to buy. Address Mary P. Taylor, owner, 24 Prospect St., Gloversville, N. Y.

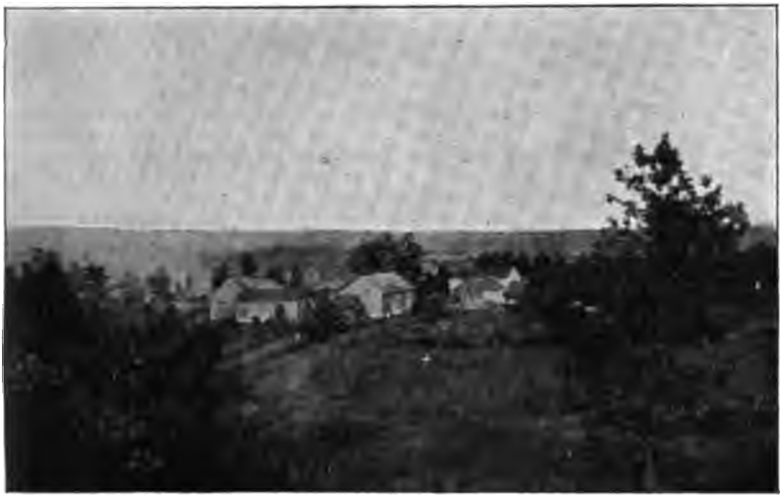

FIG. 1.— VIEW ON FARM NO. 39, TOWN OF WESTERLO, ALBANY COUNTY.

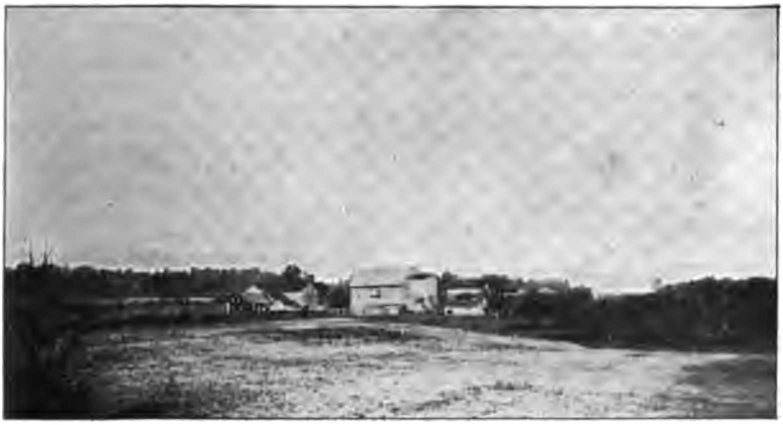

FIG. 2.— VIEW ON FARM NO. 42, TOWN OF ALFRED, ALLEGANY COUNTY.

ALLEGANY COUNTY

Area, 1,047 square miles. Population, 40,216. Annual precipitation, 42.4 inches. Annual mean temperature, 47.5°. Number of farms, 4,937. Average value of farm lands per acre, $37.32. County seat, Belmont.

Located in what is known as the southern tier of counties west of the center of the state.

The surface is rough and mountainous. The county is traversed by deep valleys the sides of which are, in many places, too steep for cultivation. Some of the elevations are from 500 to 800 feet above the valleys and from 2,000 to 2,500 feet above sea level. The Genesee River flows northwest and a little to the west of the center of the county, and many of the tributaries of this river have cut deep valleys in different directions.

The soil of the county is known as a volusia soil. These soils originated through feeble glaciation and consist of a gray, light brown or pale yellow silt loam. The volusia loam is the most important agricultural soil of the volusia series. The soil upon the upland is generally a heavy clay. This soil is excellently adapted to grazing, and wherever found, dairying can be profitably engaged in. It is good soil for grains and general farming. Notwithstanding the roughness of the surface features, Allegany County contains many excellent farms and farm lands.

The lines of communication necessarily follow the valleys and pass in crooked lines throughout the county. There are more than fifteen hundred miles of graded and improved highways. There are many villages in the county but no large cities. The excellent school advantages are shown by the 245 district schools and Alfred University. This university, located at Alfred, offers a four-year course in agriculture.

Some of the leading crops of the county are as follows: Corn, shelled, 18,342 bushels; oats, 1,108,097 bushels; wheat, 29,802 bushels; barley, 87,910 bushels; buckwheat, 112,451 bushels; rye, 6,636 bushels; potatoes, 351,697 bushels; hay and forage, 137,115 tons. The county ranks fifth in the production of potatoes and fourth in the number of farms. There are twenty-two agricultural societies for the purpose of promoting agricultural interests and improvement of rural life.

The dairy interest is shown in the 30,655 milch cows found on the farms of the county. The other live-stock are horses, 11,982; swine, 9,980; sheep, 11,393; poultry, 209,320. The total value of all farm property is $26,071,862, a small increase over that of 1900, namely, $1.21 per acre.

TOWN OF ALFRED

Population 1,495

No. 42.— Farm of 114½ acres; located 1 mile from Alfred P. O., and 3 miles from railway station at Alfred station, on line of Erie R. R.; 1 mile from school and churches; 5 miles from butter factory and 3 miles from milk station. General surface of farm, sloping. Nearest city, Hornell, population, 14,352, 12 miles distant, reached by rail and highway; auto bus, three times a day. Altitude, 2,000 feet. Nature of soil, clay loam. Acres that can be used as meadow, 75; in natural pasture, 38; in timber, 30, beech, maple, basswood and ash. Acres tillable, 85. Fruit, 11 pear, 50 apple and 4 plum trees. Best adapted to hay, oats, corn and potatoes. Fences, ½ woven wire, some barbed wire and rail, good condition. House, 15 rooms, besides hall and closets, in good condition, with large wood house attached. Outbuildings, cow barn with basement, 32x44, gambrel roof, with silo attached; hog house, 12x16; 2 poultry houses for 500 hens; horse barn, 24x36, with basement; 2 box stalls and shed attached, 28x32. House has hard and soft water in kitchen; barns watered by spring; fields, by springs and brook. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, $1,500 cash, balance on mortgage with small yearly payment. Price includes farm machinery. Address, J. E. Allen, owner, Alfred, N. Y.

TOWN OF AMITY

Population 2,015

No. 43.— Farm of 407 acres; located 4 miles from Belmont P. O., R. D. 3, and railway station, on line of Erie R. R.; ½ mile from school; 4 miles from butter factory, milk station, cheese factory and milk condensing plant. Highways, good. Nearest large village, Wellsville, population, 4,595, 9 miles distant, reached by rail and highway. Surface of farm, level and rolling. Soil, black loam. Acres in meadow, 300;

in natural pasture, 60; in timber, 40, beech, maple and chestnut. Acres tillable, 300. Fruit, apples, pears, plums and cherries. Best adapted to hay and grain. Fences, woven wire and rail. Two good houses, one of 12 rooms and one of 9 rooms. Outbuildings, barn, 26x70; basement barn, 30x40; horse barn, granary and hog house. Watered by springs and creeks. Occupied by owner. Reason for selling, ill health and advanced age of owner. Price, $20 per acre. Terms, $3,000 down, balance on time. Address, Mrs. H. S. Corbin, owne Belmont, N. Y. Owner will rent.

No. 44.— Farm of 415 acres; located ½ miles from Belvidere P. O., I. D. No. 1; ½ mile from railway station at Belvidere, on line of Erie and Shawmut railways; ¼ mile from school and Protestant Episcopal church; 2 miles from butter and cheese factories; ½ mile from milk station (Borden's). Highways, level state road. Nearest village, Wellsville, population, 4,595, 12 miles distant, reached by railroad, auto bus, and state highway. General surface of farm, level, situated in Genesee Valley. Altitude, 1,300 feet. Nature of soil, rich loam. Acres used as meadow, 300; in natural pasture, 109; in timber, 6, elm, poplar and willow. Acres tillable, 375. About 100 apple trees. Can raise any crops suitable to this climate. Stump and wire fences in very good condition. Three dwelling houses, in good condition, fair size. One horse barn with basement, 40x50; one barn 50x36; granary, tool house, office building, etc. House watered by well; barns by spring water; fields by springs and wells. Genesee river along one side. Occupied by owner. Reasons for selling, death of wife and owner practicing veterinarian. Price, $30,000. Terms, one-third cash, balance bond and mortgage on farm. Personal inspection requested. Address Dr. J. H. Youngs, owner, Belvidere, N. Y.

TOWN OF ANGELICA

Population 1,718

No. 45.— Farm of 160 acres; located 2½ miles from Angelica on Shawmut R. R.; ¾ mile from school; 2¼ miles from churches; 2½ miles from butter factory, cheese factory and milk station. Highways, rather hilly, but in good condition. Nearest city, Olean, population, 17,925, 30 miles distant, reached by rail and highway. General surface of farm, slightly hilly. Nature of soil, clay loam. Acres in meadow, 80; in pasture, 60; in timber, 20. Fruit, apples, 40 or 50 trees. Adapted to hay, oats, barley, buckwheat, potatoes and corn. Fences, mostly wire, in fair condition. House, good size and nearly new. Horse barn, cow barn, silo, hog house and tool shed. Watered, house, by well; barn, by creek; fields, by spring and creek. Occupied by owner. Reason for selling, other business. Price, $25 per acre. Terms, $1,000 down and remainder on mortgage. Address, William Gallman Angelica, N. Y.

No. 46.— Farm of 110 acres; located ¾ mile from Angelica, on line of P. S. & N. R. R.; ¾ mile from school, churches, cheese factory and milk station. Highways, good. Nearest city, Olean, population, 17,925, 30 miles distant, reached by rail and highway. General surface, rolling, slopes to southeast. Altitude, 1,450 feet. Nature of soil, loam, clay subsoil. Acres that can be used as meadow, 80; in natural pasture, 30, oak, hickory and pine. Acres tillable, 80. Fruit, young bearing orchard, mostly apples (50 trees) and 250 berry bushes. Adapted to hay, grain, corn, beans and potatoes. Fences, wire, good condition. Eight-room house, concrete cellar. No barn, new granary and wagon shed, good poultry house. Watered, house, by two wells; fields, by creek; 2 miles from Genesee River; ¼ mile from Angelica Creek. Occupied by owner. Reason for selling, unable to work farm. Price, $4,500. Terms, $2,000 cash, balance on mortgage. Address, W. C. Ketchum, owner, Angelica, N. Y.

No. 47.— Farm of 283 acres; located 1½ miles from Angelica, on line of P. S. & N. R. R.; 1½ miles from school, churches, cheese factory and milk station. Highways, part hilly. Nearest village, Angelica, population, 1,138, 1½ miles distant, reached by highway. General surface of farm, hilly, rolling and level. Altitude, 1,600 feet. Nature of soil, yellow loam, clay subsoil, some stone. Acres that can be used as meadow, 75; in natural pasture, 125; in timber, 83, second growth, hardwood, mostly oak. Acres tillable, 75. Fruit, 30 apple trees. Adapted to grain, potatoes and buckwheat. Fences, American wire, rail and pine stump, fair condition. House, 1 story, 7 rooms, some repairs needed. Barn, 30x58; barn, 30x40, with basement; barn, 26x36; 2 of the barns need some repairs; tool house, 18x24. House and barns have running water from spring; fields watered by springs. Occupied by tenant by month. Reason for selling, other business. Price, $5,000. Terms, $1,000 cash, balance in yearly payments of $500. Address, S. G. Horner, Angelica, N. Y. Will rent.

TOWN OF BIRDSALL

Population 564

No. 48.— Farm of 214 acres; located 1 mile from Birdsall P. O., R. D. No. 1 and railway station, on line of Shawmut R. R.; 1 mile from school, churches, butter factory, cheese factory and milk station. Highways, good. General surface features of farm, rolling, 50 acres level and hill pasture of 30 acres. Altitude, 1,300 feet. Nature of soil, clay and gravelly loam. Acres that can be used as meadow, 150; in natural pasture, 30; in timber, 34, hardwood. Acres tillable, 180. Fruit, 50 trees; apples, pears, cherries, plums and peaches. Adapted to potatoes, beans, hay, oats and buckwheat. Fences, American wire, new. Large house in fine condition. Basement barn, 40x60. House watered by drilled well, barns by running water, and fields by springs. Black River, 1 mile distant. Occupied by tenant. Reason for selling, lack of time to attend to farm. Price, $5,500. Terms, half cash, balance on mortgage. Land very productive. Railroad 1,500 feet from buildings, switch at this point to load produce. Address Harry Craig, owner, Canaseraga, N. Y.

TOWN OF GROVE

Population 752

No. 49.— Farm of 250 acres; located 3 miles from Swain P. O.; 4 miles from railway station at Dalton, on line of Erie R. R.; 1 mile from school and cheese factory; 7 miles from milk station and 2 miles from Methodist Church. Highways, good condition. Surface of farm, nearly level. Soil, loam. Acres that can be used as meadow, 160; in natural pasture, 40; in timber, about 50, second growth. Acres tillable, 160. Fruit, two small apple orchards. Adapted to hay, oats, barley, beans, buckwheat and corn. Fences, mostly wire, need some repairing. House, 18x28, 2 stories, wing, 18x18. Outbuildings, 2 barns, protected barn yard, poultry house. Watered, house, by well; barns, by cistern; fields, by springs. Occupied by tenant. Reason for selling, ill health of owner. Price, $7,000. Terms, $2,000 cash, balance on long time. Address, George W. Carter, owner, Nunda, N. Y. Will rent.

TOWN OF HUME

Population 1,915

No. 50.— Farm of 175 acres; located 1 mile from Hume P. O., R. D., and 2 miles from railway station at Fillmore, on line of Pennsylvania R. R.; ¾ mile from school; 1 mile from churches; 2 miles from butter factory, cheese factory, milk station and condensing plant. Highways, state road. General surface, rolling and level. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 85; in natural pasture, 75; in timber, 25, hemlock, oak and chestnut. Acres tillable, 75. Fruit, 80 apple trees. Adapted to grain, beans, potatoes and hay. Fences, good, woven wire and barbed wire. House, 18x24; wing, 18x20; good condition; bath room. Outbuildings: barn, 30x80, horse barn attached, 16x30; hog and poultry house, 12x18, and granary, 16x18. Occupied by owner. Reason for selling, wishes to retire. Price, $5,500. Terms, $2,000 cash, balance on mortgage. Address M. J. Marville, owner, Fillmore, N. Y.

TOWN OF RUSHFORD

Population 1,326

No. 51.— Farm of 154½ acres; located 4 miles from Houghton P. O., R. D. No. 1; 2 miles from railway station at Rushford, on line of Wellsville & Buffalo R. R.; ½ mile from school; 3 miles from churches; 5 miles from butter factory; 1 mile from cheese factory and milk station. Highways, good. General surface of farm, slightly rolling. Nature of soil, gravelly. Acres that can be used as meadow, 100; in natural pasture, 40; in timber, 15, hemlock, beech and maple. Acres tillable, 100. Fruit, 70 apple, 4 plum, a few cherry and pear trees. Adapted to corn, potatoes, grain and hay. Fences, woven wire, good condition. House, good condition. Barn, 70x30; barn, 50x30, with 20-foot posts and concrete floor; silo, with gambrel roof; hog pen, 26x30, with concrete floor; poultry house, 14x24, with concrete floor. Watered, house, by cistern and well; barns, by well, and fields, by creek and springs. Occupied by owner. Reason for selling, poor health. Price, $8,000. Terms, $2,500, cash, balance on mortgage at 5 per cent. Address, Melvin H. Crowell, owner, Houghton, N. Y.

TOWN OF WEST ALMOND

Population 462

No. 52.— Farm of 267 acres; located 8 miles from Belmont, on lines of Erie and B. & S. R. Rs.; 2 miles from school; 1 mile from church and cheese factory; ½ mile from milk station and 9 miles from condensing plant. Highways, good. General surface of farm, rolling. Altitude, 2,100 feet. Nature of soil, clay subsoil. Acres in meadow, 125; in pasture, 75; in timber, 67, beech, maple and basswood. Acres tillable, 200. Fruit, about 50 apple trees. Adapted to oats, buckwheat, barley and hay. Fences, wire, fair condition. House, 60x40; 2 barns, one with gambrel roof, good condition, the other poor. House watered by spring; barns, by creek. Reason for selling, to settle estate. Price, $4,500. Terms, $500 cash, balance on easy payments, or $4,000 cash. Address, Mrs. L. T. Peck, owner, Alfred, N. Y. Owner will rent.

No. 53.— Farm of 150 acres; located 8 miles from Almond; 4 miles from railroad station at Angelica, on line of Shawmut R. R.; ½ mile from school and churches; 8 miles from butter factory and condensing plant; ½ mile from cheese factory; 6 miles from milk station. Highways, mostly level. General surface, mostly level. Altitude, 2,100 feet. Nature of soil, clay subsoil. Acres in meadow, 60; in natural pasture, 70; in timber, 20, maple, beech. Acres tillable, 100. A few apple trees. Adapted to oats, buckwheat, hay and barley. Fences, wire, fair condition. House, 40x60; barn and silo, fair condition. Watered by spring piped to house; barns, by running water in yard; fields, by springs. Occupied by tenant. Reason for selling, to settle estate. Price, $2,500. Terms, $500 cash, balance on mortgage. Address, L. T. Peck, owner, Alfred, N. Y.

BROOME COUNTY

Area, 609 square miles. Population, 90,641. Annual precipitation, 38.27 inches Annual mean temperature, 48.6°. Number of farms, 4,017. Average value of farm lands per acre, $31, an increase of 9.8 per cent. in 10 years. County seat, Binghamton.

Located in what is known as the southern tier of counties bordering on the Pennsylvania line.

The surface of the county is diversified with rolling uplands, broad intervales and narrow valleys. Altitude of the hill ranges vary from 300 to 600 feet above the valley and 1,200 to 1,500 feet above sea level. Generally these hills are rounded and arable. Along the rivers, namely: Susquehanna, Chemung and Tioughnioga, the soil is exceptionally fertile, while the higher and hilly portions afford fine grazing and are well adapted for dairying, stock raising, and for fruit, especially apples, which are raised with great success wherever orchards are properly cared for. The value of all farm property is $16,638,994. The total number of domestic animals is, dairy cows, 27,582; horses, 8,921; sheep, 5,473; poultry, 204,426. The production of principal crops was: corn, shelled, 20,500 bushels; oats, 397,077 bushels; buckwheat, 58,543 bushels; potatoes, 218,631 bushels; hay and forage, 96,409 tons. Butter wool and meat are well represented in the line of products. The production of milk was 16,069,529 gallons. Total receipts from the sale of dairy products, $1,561,745. The lines of communication through this county afford excellent transportation facilities at low rates for ample market. There are no large tracts of timber, but most farms are well supplied with wood. Ponds, wells, springs and streams give abundant supply of excellent water. There are 207 district schools, a Pomona grange and ten subordinate granges, a cow testing association, poultry association, county agricultural societies, county fire relief association, which with the Binghamton Industrial Exposition, furnish educational advantages above the ordinary. There are 48 milk stations and factories in this county.

Transportation facilities are afforded by the Delaware, Lackawanna & Western, the Erie and the Delaware & Hudson railways, which traverse the county.

TOWN OF BINGHAMTON

Population 731

No. 54.— Farm of 125 acres; located 8 miles from railway station at Vestal, on line of D., L. & W. R. R.; ½ mile from school; 2 miles from churches; 1½ miles from butter factory; 8 miles from cheese factory, milk station and condensing plant. Highways, good. Nearest city, Binghamton, population, 53,668,

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9 miles distant. General surface, rolling to level. Altitude, 1,300 feet. Nature of soil, loam and clay. Acres that can be used as meadow, 90; in natural pasture, 20; in timber, 15, chestnut and hard wood. Acres tillable, 100. Fruit, 40 apple, 10 cherry and 6 plum trees. Adapted to potatoes, hay, oats, corn, rye and buckwheat. Fences, rail and stump. House, 6 rooms, old. Barns, 32x40 and 26x80, good condition. House, watered by well; barns, by well; and fields, by springs. Quaker Lake, 2 miles distant and several other lakes from 3 to 6 miles distant. Occupied by owner. Reason for selling, other business. Price, $3,500. Terms, ½ cash, balance on mortgage. Address, F. E. Sibley, owner, Binghamton, N. Y., R. D. No. 2.

TOWN OF COLESVILLE

Population 2,525

No. 55.— Farm of 130 acres; located 4½ miles from Harpursville, on line of D. & H.; 1 mile from school; 2 miles from church; 3½ miles from milk station. Highways, good. Nearest city, Binghamton, population, 53,668, 20 miles distant, reached by rail and highway. General surface of farm, rolling. Soil, loam. Acres in meadow, 80; in natural pasture, 25; in timber, 25, hemlock, ash, oak, beech and maple. Acres tillable, 105. Fruit, 400 apple, 3 pear, 2 cherry, 3 peach and 3 plum trees, currants and raspberries. Adapted to corn, oats, clover and timothy hay. Fences, barbed wire, nearly new. House, 9 rooms, in good condition. Outbuildings, basement barn, 40x76, concrete floor; barn, 26x48; 2 poultry houses and milk house. Watered, house, by well; barns and fields, by springs. Occupied by tenant. Reason for selling, poor health and other business. Price, $4,500. Terms, $2,500 cash, remainder on mortgage. Address, C. B. Eldred, Harpursville, N. Y.

TOWN OF MAINE

Population 1,339

No. 56.— Farm of 120 acres; located 1¼ miles from postoffice at Union Center, R. D. No. 2; 5 miles from railway station at Union, on line of Erie R. R.; 1¼ miles from school; 1 mile from churches; 1¼ miles from condensing plant. Highways, macadam, good. Nearest village, Endicott, population, 5,581, distant 5 miles, reached by highway, auto stage. General surface of farm, 85 acres nearly level, rest rolling. Altitude, about 800 feet. Nature of soil, clay loam. Acres that can be used as meadow, 85; number now so used, 75; in natural pasture, 25; in timber 10, beech, maple, chestnut. Acres tillable, 85. Forty apple trees. Adapted to corn, potatoes, wheat, buckwheat, oats. Mostly wire fences, good condition. Stucco house, 28x38, wing and two large porches. Hen house; hog house; cow barn, 30x40; horse barn, 24x32; hay barn, 28x40. House watered by running water; barns by well; fields by springs. Farm bounded on east by Nanticoke creek. Now occupied by tenant. Reason for selling, other business. Price, $6,000. Terms, $2,000 down, 10 years or more for balance at 5 per cent interest. Will rent. Auto bus passes house three times a day. Address A. E. Whittemore, owner, Union, N. Y., R. D. 2.

No. 57.— Farm of 121½ acres; located 3 miles from Maine postoffice; 8 miles from railway station at Whitney Point, on line of D., L. & W. R. R.; ¾ mile from school; 3 miles from churches, butter factory and condensing plant. Highways, good. Nearest village, Endicott, population, 5,581, distant 11 miles, reached by highway. General surface of farm, part level, part hilly. Nature of soil, yellow loam and gravel. Acres that can be used as meadow, 50; number now used as meadow, 40; in natural pasture, 50; in timber, 25, ash, chestnut, beech and maple, young timber. Apple trees, 35 or 40. Adapted to potatoes, corn, wheat, buckwheat and oats. Wire, board and rail fences in fair condition. House, 20x32 feet, upright, 2 wings, in good condition. Barn 36x46, basement; wing, 36x40; small barn, 16x20; granary, 12x16; hog house, 16x20, condition good. House watered by well and running water; barn, by running water; fields, by springs. Occupied by owner. Reason for selling, old age. Price, $3,800. Terms, $2,000 down, balance on time. Address John J. Atwater, owner, Maine, N. Y.

TOWN OF NANTICOKE

Population 549

No. 58.— Farm of 135 acres; located 1 mile from Ketchumville P. O.; 7 miles from railway station, at Newark Valley, on line of L. V. R. R.; 1 mile from school, churches, and butter factory; 2½ miles from cheese factory; 1 mile from milk station and 7 miles from condensing plant. Highways, fair. Nearest village, Newark Valley, population 808, 7 miles distant, reached by highway. Surface, rolling. Soil, rich and fertile. Acres in meadow, 70; in natural pasture, 35; in timber, 30; hard wood; acres tillable, 90. Fruit, cherry, pear and apple trees, some small fruits. Fences, barbed wire, in good condition. House, 42 x 24, 2 stories, with wing, somewhat run down. Outbuildings, barn, 36x40; granary and hog pen, 12x14. Watered, house by well, fields by creek and spring. Occupied by tenant. Reason for selling, poor health of owner. Price, $2,300. Terms: agreeable to buyer. Address Charles Parsons, owner, Newark Valley, N. Y. Will rent.

No. 59.— Farm of 39 acres; located 3 miles from Lisle P. O., R. D. 1; 3 miles from railway station at Lisle and Whitney's Point, on line of D. L. & W. R. R.; 16 rods from school and 3 miles from churches, 3 miles from butter and cheese factories, milk station and condensing plant. Highways, ½ hilly, ½ level, part state road, balance dirt roads, good condition. Nearest city, Binghamton; population, 53,668, distant, 22 miles, reached by rail and highway. General surface, hilly and level. Nature of soil, loam and sandy strong soil. Acres in meadow, 16; in natural pasture, 18; in timber, 2. 100 sugar maples, beech, hemlock, ash and basswood; acres tillable, all except woods. Fruit, 117 apple trees, young pear and cherry trees, 2 crab apple. Fences, wire, all in first class order. Adapted to oats, potatoes, corn, rye, buckwheat, beans and alfalfa. House, ground floor space, 45x62; chamber room space, 24x36; 6 rooms, all new within last three years, open fireplace in living room; good cellar, never freezes and never has to be banked. Outbuildings: basement barn, 30x40, 3 box stalls, stanchions for 6 cows, poultry house, 2 stories, 12x16, good condition. House watered by well in house, also well ½ rod from kitchen door, barn by creek within 3 rods. Occupied by owner. Reason for selling, other business. Price, $2,000. Terms, $800 down, balance 6%. Address Arthur C. Mathewson, owner, Lisle, N. Y.

TOWN OF WINDSOR

Population 2,384

No. 60.— Farm of 40 acres; located 1 mile from Windsor P. O., R. D., and ½ mile from railway station at Windsor, on line of D. & H. R. R.; 1 mile from school; 1 mile from churches and butter factory: 1½ miles from milk station and 5 miles from cheese factory. Highways, macadam road. Altitude, 800 feet. Soil, clay loam. Acres that can be used as meadow, 3; in natural pasture, 10; in wood, 25, chestnut fence posts, maple, etc. Acres tillable, 10. Fruit: cherries, pears, apples and grapes. Adapted to potatoes, corn and garden truck. Fences, wire, fair condition. House, two stories, 5 rooms. Barn, 20x 30, new; small poultry house. Watered, house and barn by well, fields by springs. Occannum Creek runs through the place. Occupied by tenant. Reason for selling, in other business. Price, $500. Terms cash. This farm is located on Binghamton and Windsor Auto Bus Line. Suitable for poultry farm. Address Volney K. Soule, owner, Exchange Building, Binghamton, N. Y.

No. 61.— Farm of 50 acres; located 4½ miles from postoffice, R. D. No. 2; 4½ miles from railway station at Windsor, on line of D. & H. R. R.; 1 mile from school and church; 4½ miles from milk station. Highways, macadamized, good. Nearest city, Binghamton, population 53,668, 10½ miles distant, reached by highway. General surface, rolling and level. Soil, rich, loamy. Acres that can be used as meadow, 40; 25 now so used; in natural pasture, 23 acres; in timber, 7, all kinds of hard wood. Acres tillable, 40. Fruit trees: 25 apple, 2 pear, 3 cherry, 1 plum, ¼ acre strawberries and red raspberries. Adapted to potatoes and grain. Mesh wire fences, in good condition. Nine-room house in good condition. Two barns, one 36x40; cow barn, 36x40, with leanto, 20x30; hen house, 12x30; hog house; wood shed. Running water in house and barns; fields watered by springs. Susquehanna river, 4½ miles away. Occupied by owner. Reason for selling, poor health. Price, $2,500. Terms, cash. Seven acres consist of creek flat suitable for garden truck. Address Richard M. Brown, owner, Windsor, N. Y., Route 2.

CATTARAUGUS COUNTY

Area, 1,250 square miles. Population, 72,756. Annual precipitation, 47.71 inches. Annual mean temperature, 47.4°. Number of farms, 6,017. Average value of farm lands per acre, $34.94, an increase of 32.4 per cent. in 10 years. County seat, Little Valley.

Located near the southwest corner of the state with its entire southern boundary on Pennsylvania.

The surface is a hilly, rolling upland, separated by deep valleys into distinct ridges having a north and south direction. Nearly the whole county is broken, but most of the hills are arable to their summits. In some instances they are too steep for proper cultivation but afford excellent pasturage. Toward the northern part the hilly or mountainous features are considerably modified. An unusual number of streams thread the county, the Allegany river and Cattaraugus creek being the principal ones. Most of these streams afford water power and could be made of great value for the use of the farmers. Good building stone is found in large quantities. The soil is rich and productive, highly adapted to hay and forage, dairying and general farming. The county is traversed by several trunk lines of railways and branches which give it transportation facilities of the highest order. The Erie, Pennsylvania, Pittsburg and Rochester and other lines pass through this county in all directions. There are forty miles of state road and 1,576 miles of improved highway.

The principal products of the county are as follows: Corn, shelled, 47,404 bushels; oats, 1,022,264 bushels; barley, 17,855 bushels; buckwheat, 121,703 bushels; potatoes, 235,003 bushels; hay and forage, 176,513 tons; maple sugar, 493,694 pounds. Fruit is successfully grown, the county standing twelfth in the production of apples and fifteenth in the production of grapes. There were 5,556 farms reporting domestic animals as follows: milch cows, 47,383; horses, 11,987; sheep, 4,435; swine, 13,125; poultry, 257,506; dairy products amounted to 29,530,826 gallons of milk. The value of dairy products is given at $2,608,086. The total valuation of all farm property is given at $30,276,650. Churches of all denominations are scattered throughout the county. Thirty-two agricultural organizations assist in bettering agricultural and social conditions. The 343 district schools, together with the high schools of the villages, a State Normal School at Fredonia, and St. Bonaventure's College at Allegany afford excellent educational advantages.

TOWN OF COLDSPRING

Population 722

No. 62.— Farm of 153 acres; located 10 miles from Little Valley P. O., R. D. No. 2; 5 miles from railway station at Salamanca on line of Erie R. R.; school on farm; ½ mile from church; 4½ miles from cheese factory; 1¾ miles from milk station and 10 miles from condensing plant. Highways, good. Nearest city Salamanca, population 8,370, 5 miles distant, reached by highway. General surface of farm, rolling, slopes towards north. Altitude, about 500 feet. Nature of soil, dark loam. Acres that can be used as meadow, 40; in natural pasture, 80; in timber, 33, hardwood. 150 young sugar trees. Acres tillable, 40. Fruit, 65 apple trees. Best adapted to corn, hay, oats and potatoes. Fences, wire, nearly new. House, 11 rooms, in excellent condition. Outbuildings, barn 30 x 60, with basement, good condition; silo, capacity 50 tons; tool barn and tenant house. Watered, house, by well; barns, by spring, and fields, by spring and creek. Occupied by owner. Reason for selling, ill health of wife. Price $4,500. Terms: $3,000 cash, balance on mortgage. Address W. J. Casler, owner, Little Valley, N. Y., R. D. No. 2.

TOWN OF ELLICOTTVILLE

Population 1,844

No. 63.— Farm of 105½ acres; located 5 miles from Ellicottville P. O., R. D. No. 2, and railway station, on line of B. R. & P. R. R.; ½ mile from school; 3 to 5 miles from churches; ¾ mile from cheese factory and 5 miles from condensing plant. Highways, good, mostly level. Surface, 40 acres level, 40 rolling and 25 hilly. Altitude, 1,600 feet. Soil, gravel loam. Acres that can be used as meadow, 60; in natural pasture, 80; in timber, 15, second growth of hardwood. Acres tillable, 75. Fruit, 2 apple orchards, 4 pear, 1 cherry and 6 plum trees, also currants. Best adapted to corn, hay, oats and potatoes. Fences, barbed wire, good condition. House, 2 stories, good

condition, 7 rooms below, unfinished above. Outbuildings: barn, 48 x 60, and shed for cows, fair condition; barn, 24 x 36, good condition; new combination hog house, poultry house and granary, 100 x 18, concrete floor. House and barns watered by pipes from spring, and fields by springs and creek. Occupied by owner. Reason for selling, wants a larger farm. Price, .$3,150. Terms, $1,500 cash and 5 per cent. mortgage for balance with $100 payable on principal yearly. Price includes all coarse fodder on farm. Address Nannen Bros., owners, Ellicottville, N. Y.

TOWN OF FARMERSVILLE

Population 976

No. 64.— Farm of 230 acres; located 2¼ miles from Farmersville Station P. O., R. D. No. 1, and railway station on line of B., R. & P. R. R.; ½ mile from school; 2½ miles from churches and cheese factory; 2½ miles from condensing plant. Nearest village, Franklinville, 6 miles distant, population 2,065, reached by good highway. General surface, rolling, some hilly. Acres in meadow, 75; in pasture, 100; in timber, 55; beech and maple, very good. Acres tillable, 90. Apple orchard. Best adapted to oats, barley, buckwheat and potatoes. Fences, good wire. House, 20 x 24, wing, 16 x 18, good condition. Barn, 40 x 80, with gambrel roof, both house and barn nearly new. Watered, house and barns by pipe from spring; fields, by creek. Occupied by tenant. Reason for selling, owner has other farm, unable to take care of both. Price $5,000. Terms, part down, balance on mortgage. Address Benjamin Georess, owner, Farmersville Sta., N. Y. Will rent.

TOWN OF FREEDOM

Population 1,124

No. 65.— Farm of about 200 acres; located 1¾ miles from Sandusky P. O. and railway station, on line of Buffalo & Susquehanna R. R.; ½ mile from school; 1½ miles from churches; milk taken at door; 5 miles from powdered milk factory; 1¾ miles from milk station. Highways, in good condition. Nearest large village, Arcade, population 1,568, 5 miles distant, reached by rail or highway. Surface of farm, rolling. Good soil. Acres in meadow, 100; in timber, 15, hemlock, maple, birch and beech. Fruit, 100 trees. Adapted to all crops grown in this climate. Fences, wire, fair condition. House, upright, 18x24; wing, 16x20, and wing, 16x30. Outbuildings, barn, 30x40, with wing, 26x30, and wing, 14x35, concrete floors. House and barn have fine water piped from springs. Occupied by owner. The house has fine bath, hot and cold water. Concrete milk house watered with pipes. Reason for selling, owner a widow. Price, $8,000. Terms, easy. Address Mrs. Marriette J. Charles, owner, Sandusky, N. Y.

No. 66.— Farm of 243 acres; located 1 mile from Sandusky P. O., and railway station on line of B. & S. R. R.; 1¼ miles from school; 1 mile from churches; 4 miles from cheese factory, milk station and condensing plant. Highways, level. Nearest village, Arcade, population 1,568, 4 miles distant, reached by rail. General surface, about ⅝ nearly level, some rolling. Altitude, 1,300 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 125; in natural pasture, 75; in timber, 30; beech, maple and some hemlock. Acres tillable, 175. Fruit, enough for family use. Adapted to beans, potatoes, corn, grain and hay. Fences, mostly wire. House, 1½ stories, good condition. Outbuildings, horse barn, 24 x 30, good condition, barn, 22 x 40, good condition. House has city water; barns, same and creek; fields, watered by creek. Occupied by tenant. Reason for selling, other business. Price, $24 per acre. Terms, $500 cash, $200 in yearly payments. Address J. S. Charles, owner, Bliss, N. Y. Will rent.

No. 67.— Farm of 149 acres; located 2 miles from Farmersville P. O. and railway station, on line of Buffalo, Rochester & Pittsburg R. R.; 1 mile from school and churches; 8 rods from milk station and 6 miles from condensing plant. Highways, dirt road, very good. Nearest village, Franklinville, population 2,065, reached by highway. General surface of farm, very level. Nature of soil, gravelly loam. Acres that can be used as meadow, 125; in timber, 25, all maple trees. Fruit, 50 apple trees. Best adapted to hay, oats, corn and potatoes. Fences, mostly wire, good condition. House, 9 rooms, good cellar. Outbuildings, barn 80 x 36, gambrel roof; milk house; garage and shop 18 x 24, all equipped with lightning rods and all new. Watered, house by well, barns, by well, and fields, by creek. Occupied by owner. Reason for selling, ill health. Price $11,000. Terms: $3,000 cash, balance on mortgage at 5%. Address M. J. Wheeler, owner, Delevan, N. Y.

TOWN OF NEW ALBION

Population 2,152

No. 68.—Farm of 165 acres; located ½ mile from New Albion P. O.; 3½ miles from Cattaraugus, on line of Erie R. R.; ½ mile from school, church and cheese factory; 3½ miles from milk station and 6 miles from powdered milk plant. House, large and in good condition. Barns, 2, in good condition. Good orchard. Fences, wire, in good condition. Acres that can be used as meadow, 60; in natural pasture, 85; in timber, 38; second growth, maple and beech; acres tillable, 60. Best adapted to hay and grain. House watered by gravity spring; fields, by creek and several springs. Price $4,900. Terms: $1,000 or more cash; balance on mortgage. Address A. P. Burroughs, owner, Suffern, N. Y. Owner will rent.

TOWN OF OLEAN

Population 1,324

No. 69.— Farm of 130 acres; located 3½ miles from Olean postoffice, R. D. No. 1; 3 miles from railway station at Olean, on line of Erie R. R. and Penn. R. R.; ½ mile from school; 3½ miles from churches; 1 mile from cheese factory; 3 miles from milk station. Highways, state road and dirt, all good. Nearest city, Olean, population, 17,925, distant 3 miles, reached by highway. General surface of farm, tillable land level, some hill pasture. Soil, mostly clay loam. Acres that can be used as meadow, 80; acres now used as meadow, 65; in natural pasture, 50; in timber, 15, second growth, mostly hardwood. Acres tillable, 65. Adapted to hay, oats, corn and potatoes. Mostly wire fences, in fair condition. House, large, and in good condition. No barns, burned a year ago. House watered by well; fields by creek and springs. Olean creek bounds farm on west. Occupied by owner. Price, $7,000. Terms, $2,000 cash, mortgage for balance. Address Adelia Van Dusen, owner, Olean, N. Y., R. F. D. No. 1.

TOWN OF PERSIA

Population 1,800

No. 70.— Farm of 25 acres; located 1½ miles from Gowanda P. O., R. D. 3; 1½ miles from railway station at Gowanda, on line of Erie R. R.; ½ mile from school; 1½ miles from seven churches; 1½ miles from milk station. Highways, good. Surface, somewhat hilly. Soil, loam and gravel. Acres in natural pasture, 15; in timber, 10, beech, maple, chestnut, hemlock, etc.; acres tillable, 15. Adapted to wheat, corn, oats, potatoes, etc. Fences, wire. No house or barn. Watered by spring and brook. Occupied by tenant. There is a fine water power site at one end of place. Dam could be constructed 65 feet high and 110 feet long, giving a fall of 80 to 90 feet. Reason for selling, owner has too much land. Price, $3,000 with water rights, or $1,500 without water rights. There is also a large marl lime deposit. Terms to suit buyer. Address Norman B. Allen, owner, Gowanda, N. Y. Owner will rent for cash for term of 1 to 10 years, or with option to buy.

No. 71.—Farm of 50 acres; located 1½ miles from Gowanda P. O., R. D. 3; 1¼ miles from railway station at Gowanda, on line of Erie R. R.; ½ mile from school, 1½ miles from churches and ½ mile from cheese factory. Highways, good. Nearest village, Gowanda, population 2,524; reached by highway. General surface of farm, hilly. Soil, gravelly loam. Acres in meadow, 15; in natural pasture, 15; in timber, 20; chestnut and beech. Acres tillable, 15. Fruit, 25 apple trees. Adapted to general crops. Fences, wire, fair condition. Watered by never failing springs and brook. Occupied by tenant. There are no buildings on this property. Reason for selling, owner wishes to retire. Price, $2,000. Terms: $700 cash, balance to suit purchaser. Address Norman B. Allen, owner, 159 Main street, Gowanda, N. Y. Owner will rent.

TOWN OF SALAMANCA

Population 414

No. 72.— Farm of 136 acres; located 4 miles from Little Valley P. O., R. D. 2; 3½ miles from railway station at Salamanca, on line of Erie, B., R., P. and Pa. R. Rs.; ½ mile from school; 2 miles from Protestant churches; 40 rods from milk station. Highways, level. Surface of farm, some hilly and some level. Soil, good gravelly loam, part clay subsoil. Acres in meadow, 25; in natural pasture, about 50; remainder in timber, hard and soft wood. Fruit, about 70 apple trees. Fences, board and wire, good. Best adapted to hay, oats and corn. House, 10 rooms, 2 stories, good condition.

Outbuildings: barn, 40 x 48; barn, 30 x 44, capable of holding 25 cows and 5 horses; silo; hog pen and poultry house, 20x26, fair condition. Watered, house, by well; barns, by spring and creek; fields, by spring and creek. Occupied by owner. Reason for selling, advanced age of owner. Price, $50 per acre. Terms, ½ down. Price includes all stock except 1 horse, buggy and cutter and one cow. Telephone in house. Trolley line about 2 miles from farm. Address J. N. Jones, owner, Little Valley, N. Y., R. D. 2.

CAYUGA COUNTY

Area, 752 square miles. Population, 65,751. Annual precipitation, 44.71 inches. Mean temperature, 50.4°. Number of farms, 4,785. Average price of farm land per acre, $50.40. County seat, Auburn.

Located in the central part of the State in the finger lake section. Its boundaries are long, narrow and irregular, trending north and south. The northern line is bounded by Lake Ontario, the lower western part by Lake Cayuga and touching Skaneateles Lake on the east. Lake Owasco is located in the center of the county, not far from the city of Auburn.

The surface of the county is undulating. The Seneca river traverses the upper part of the county, with numerous small streams affording good water power and giving, with the ponds and lakes of the county, an abundant supply of excellent water.

The soil is very fertile, consisting of a fine quality of sandy or gravelly loam intermixed with clay, muck and alluvium in the northern part, and a very productive gravelly and clay loam in the southern part. Markets are easily reached over the New York Central, the Lehigh Valley and the electric lines that traverse almost every portion of the county. The highways are in excellent condition. Along the shores of Lake Cayuga are numerous quarries of water lime, quicklime, gypsum and sandstone.

There are reported on the farms of the county 74,727 domestic animals and 360,351 head of poultry. The products of the county are milk, 14,034,684 gallons from 21,390 dairy cows, the total receipts for all dairy products being $1,251,408. The principal crops are: corn, shelled, 431,341 bushels; oats, 1,096,945 bushels; barley, 288,077 bushels; buckwheat, 208,400 bushels; potatoes, 302,774 bushels; hay and forage, 137,600 tons. The county ranks first in barley and buckwheat, fourth in corn, fifth in honey. Cayuga county is also an excellent fruit county. Apples, cherries, peaches, pears, plums and prunes are raised in abundance and are of the finest quality. The total value of farm property in this county is $26,915,448, an increase in 10 years of 19.8 per cent. over the value given in 1900.

There are scattered throughout the county a number of excellent district schools, high and graded schools, all up to the standard of excellence demanded by the State. Wells College for Women is located at Aurora.

TOWN OF IRA

Population 1,467

No. 73.— Farm of 184 acres; located 1 mile from Ira P. O. and railway station, on line of L. V. R. R.; 30 rods from school; 1 mile from churches; 4 miles from butter factory; 4 miles from cheese factory and 1 mile from milk station. Highways, improved road. General surface, level. Nature of soil, clay and limestone. Acres that can be used as meadow, 154; in natural pasture, 30; in timber, 30, mostly hard wood. Acres tillable, 150. Fruit, 150 bearing apple trees, peaches and small fruit. Adapted to dairying and general farm crops. Fences, fair condition. Large square house, 10 rooms, in good condition, newly painted. Barn built in 1913, 40x80, with basement, plank frame, gambrel roof with steel roofing, a small barn, poultry house and pig house. House watered by well; barns by well; and fields by creek. Occupied by owner. Reason for selling, owner desires a smaller farm. Price, $10,000. Terms, cash. Excellent alfalfa land, sap bush of over 300 trees. Address H. J. Wolven, owner, Ira Station, N. Y.

No. 74.— Farm of 128 acres; located 1 mile from Ira P. O., 3½ miles from railway station, on line of L. V. R. R.; ½ mile from school; 1 mile from churches, 3½ miles from milk station,

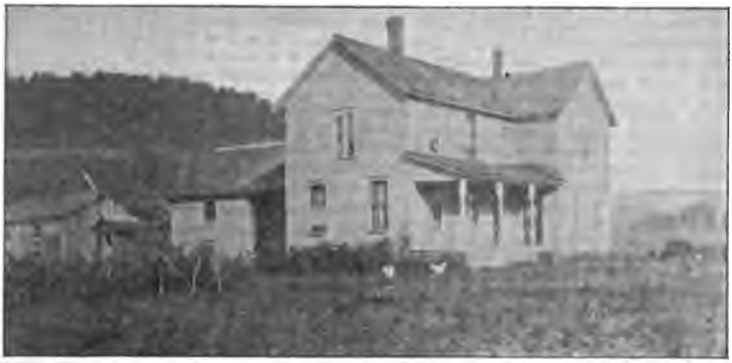


Fig. 3.— House on Farm No. 72, Town of Salamanca, Cattaraugus County.

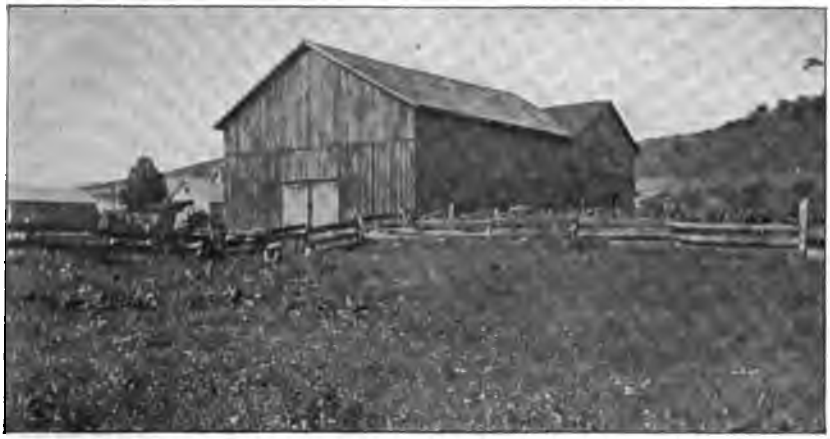


Fig. 4.— Barn on Farm No. 72, Town of Salamanca, Cattaraugus County.

and 3 miles from cheese factory. Highways, good. Nearest city Fulton, population 11,138, 11 miles distant, reached by highway. General surface, rolling. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 110; in natural pasture, 3; in timber, 13, beech, maple, hemlock and elm. Acres tillable, 110. Fruit: apples, peaches, prunes, pears, grapes and currants. Best adapted to wheat, barley, oats, corn, tobacco and potatoes. Fences, fair condition. House, 10 rooms and 8 smaller rooms for clothes presses, etc. Outbuildings: barn, 36x78, with basement; tobacco shed, 24x50; hay shed, 24x48; corn house, with basement, 18x28; hog pen; poultry house, 12x60. House watered by running water, barns same. Occupied by tenant. Reason for selling, wishes to retire. Price, $5,500. Terms, $2,000 cash, balance on mortgage. Address Oscar A. Foote, owner, Cato, N. Y.

TOWN OF MENTZ

Population 1,901

No. 75.— Farm of 137 acres; located 1 mile from Port Byron P. O., R. D. No. 40; ¼ mile from railway station at North Port Byron, on line of N. Y. C. R. R.; ¾ mile from school; 1 mile from churches and butter factory and ¼ mile from milk station. Highways, state road, level. Nearest city, Auburn, population 32,468, 9 miles distant, reached by rail and highway. General surface, nearly level. Nature of soil, clay and gravel. Acres that can be used as meadow, 100; in natural pasture, 37; in timber, 3, young hickory. Acres tillable, 120. Fruit: apples, pears, peaches, quinces, raspberries, strawberries, enough for home use. Adapted to alfalfa, hay, wheat, oats,. potatoes, beans, buckwheat, etc. Fences, woven wire, almost new. 16 room double house, hard wood floors, etc. Outbuildings, barn, 30 x 45, with sheds attached, horse barn and basement, 24 x 36, stalls for 5 horses, tie up for 14 cows. Watered, house by well; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $13,000. Terms, $8,000 cash, balance on mortgage. Address Nathan L. Rowe, owner, Port Byron, N. Y., R. D. 40. Will rent with option to buy.

TOWN OF NILES

Population 1,254

No. 76.— Farm of 105 acres; located 5½ miles from Moravia on line of Lehigh Valley R. R.; 1⅛ miles from school; 3 miles from churches; 2 miles from cheese factory and 5½ miles from milk station. Highways, dirt roads. General surface of farm, level. Nature of soil, loam. Acres that can be used as meadow, 95; in natural pasture, 5; and in timber, 5, maple; acres tillable, 95. Fruit, 80 apple and 5 pear trees. Best adapted to potatoes, oats, barley and buckwheat. Fences, wire, in poor condition. House 24 x 24. Outbuildings, 3 barns 30 x 58, 26 x 36 and 30 x 40. Watered, house and barns, by well; fields, by spring. Occupied by tenant. Reason for selling, to close an estate. Price, $30 per acre. Terms, ½ down and mortgage on remainder. Address W. J. Bell, Oswego, N. Y. or Mrs. W. D. Curtis, Moravia, N. Y.

No. 77.— Farm of 80 acres; located 4 miles from Owasco P. O., R. D. No. 11; 10 miles from railway station at Moravia and 12 miles from Auburn, on line of N. Y. C. R. R.; 1 mile from school; 4 miles from churches; 4 miles from butter factory; and 3 miles from milk station and cheese factory. Nature of highway, state road. Nearest city, Auburn, population 32,468, reached by highway. General surface, level and some fields rolling. Altitude, about 900 feet. Acres that can be used as meadow, all; in natural pasture, 4. Acres tillable, 75. Fruit, 40 apple trees, some pears, plums and cherries. Best adapted to hay and all kinds of grain, corn and potatoes. Fences, some woven wire, good condition. House, 40x30, wing, 22x14, 12 rooms, good condition. Outbuildings: barn, 45x40; wagon house, 25x20; granary, 16x16, 2 stories, basement under barn, concrete wall; corn crib, hog and poultry house, good condition. House watered by well and cistern, barns by wells, fields by running water. Occupied by tenant. Reason for selling, has another farm. Price, $4,000. Terms, easy. Address S. Z. Pennell, owner, Owasco, N. Y., R. D. No. 11.

No. 78.— Farm of 105 acres; located 5½ miles from Moravia, on line of L. V. R. R.; 1⅛ miles from school; 3 miles from churches; 2 miles from cheese factory and 5½ miles from milk station. Highways, dirt and state road. Nearest village, Moravia, population 1,393, 5½ miles distant, reached by highway. General surface, level. Altitude, about 1,000 feet. Nature of soil, loam. Acres that can be used as meadow, 95; in natural pasture, 5; in timber, 5, second growth beech and maple. Acres tillable, 95. Fruit, about 80 apple trees, some pears, plums and cherries. Best adapted to potatoes, oats, buckwheat and barley. Fences, mostly wire, in poor condition. House, 28 x 28, in fair condition. Outbuildings: barn, 30 x 58, barn, 26 x 36, barn, 30 x 40 and hog house. Watered, house and barns, by well; fields, by springs. Occupied by tenant. Reason for selling, to close an estate. Price, $30 per acre. Terms, ½ cash and balance on bond and mortgage. Address Mrs. W. D. Curtis, Moravia, N. Y.

TOWN OF SCIPIO

Population 1,417

No. 79.— Farm of 112 acres; located 4½ miles from Union Springs postoffice, R. D. 33; 1 mile from railway station at Kinslers, on line of Central N. Y. Southern Railway; ¼ mile from school; within 4 miles of Catholic, Presbyterian, Methodist, Episcopal and Baptist churches; 2 miles from three butter factories; 2 miles from 3 milk stations. Highways, county improved and state. Nearest city, Auburn, population, 32,468, distant 8 miles, reached by state road and railway. General surface, gently rolling, by no means hilly. Nature of soil, dark deep limestone loam. Over 105 acres can be used as meadow; 6 to 8 acres in natural pasture; in timber, 1 acre. Acres tillable, 108. Fruit trees, 50 apple, 6 pear, 6 cherry, 6 peach, 6 plum, also grapes. Adapted to cabbage, corn, potatoes, timothy and clover, alfalfa, wheat, barley, oats and buckwheat. Woven wire fences in best of condition, 20 gates all in good repair, locust and cedar posts. Frame house, 13 rooms, with bath, pressure water. Barn No. 1, basement, 80 feet long, 22 foot posts; hay carriers, granaries, stables and stiles, barn No. 2, 44 x 34, 22 ft. posts, best condition, newly painted. House watered by cistern, well and faucet water; barns by well; fields by spring, brook and wells. Four miles from Cayuga and Owasco lakes. Occupied by owner. Can give possession immediately; would sell stock, tools, feed, seed and household furniture, if desired. Reasons for selling, retirement on account of age and inability to work. Price, $100 per acre. Terms, ¼ to ⅓ cash or other good securities, balance any way to suit buyer. Address John H. Payne, owner, Union Springs, N. Y., R. F. D. 33.

TOWN OF SENNETT

Population 1,481

No. 80.— Farm of 94 acres; located 2 miles from Auburn P. O., R. D. No. 6; 1½ miles from railway station at Throopsville, on line of L. V. R. R.; 1 mile from country school and 1¾ miles from city school; 2 miles from churches and butter factory and 1½ miles from milk station. Highways, state road under construction. Nearest city, Auburn, population 32,468, ½ mile distant, reached by rail and highway. General surface of farm, level and rolling. Altitude, about 700 feet. Nature of soil, mostly loam, some heavier. Acres that can be used as meadow, 60; in natural pasture, 30; small amount in timber. Acres tillable, 65. Fruit, 36 apple, 3 cherry and pear trees. Adapted to all kinds of grain, hay, alfalfa and vegetables. Fences, mostly wire, in good condition. House, large, brick and frame with good attic. Outbuildings, 2 adjoining barns, 30 x 36; 40 x 50, with basement for stock; good poultry house 12 x 18; corn house and tool house. Watered, house, by well; barns have been supplied from spring by windmill; it is still piped but needs new windmill. Occupied by owner. Reason for selling, advanced age of owner. Price, $20,000. Terms, cash. Address Mrs. Mary Price, Auburn, N. Y., R. D. No. 6.

TOWN OF VENICE

Population 1,402

No. 81.— Farm of 105 acres; located 1 mile from Venice Center P. O. and railway station, on line of N. Y. A. & L. R. R.; 4 miles from butter factory; 1 mile from milk condensing plant. Highways, good. Nearest city, Auburn, population, 32,468, 15½ miles distant, reached by rail and highway. Surface, partly level and partly rolling. Altitude, 1,100 feet. Good soil. Acres in meadow, 20; in natural pasture, 30; in timber, 10, beech, maple and basswood; acres tillable, 75. Fruit: apples, peaches, plums and pears. Adapted to all kinds of crops grown in this climate. Fences, wire, board and rail, not very good. House, 39x36, good condition. Outbuildings: barn, 30x90; horse barn, 30x36. cow barn; 2 poultry houses; hog house. Watered by well and spring. Reason for selling, advanced age and poor health of owner. Price, $5,500. Terms, $2,000, mortgage can remain. Would sell adjoining 80 acres with the 105 described above. There are two sets of buildings, two orchards and small fruits and 18 acres of timber on this property. Will sell both farms for $9,500. Address Amos Emory Hutchinson, owner, Venice Center, N. Y.

No. 82.— Farm of 104 acres; located 2 miles from postoffice at Venice Center, R. D. No. 60; 2 miles from railway station at Venice Center, on line of C. N. Y. & S. R. R.; 1 mile from school, churches and cheese factory; 2 miles from condensing plant. Highways, improved stone road. Nearest city, Auburn, population, 32,468, distant 14 miles, reached by rail and highway. General surface of farm, slightly rolling. Altitude, about 1,000 feet. Acres that can be used as meadow, 100; number now so used, 35; number tillable, 100. Enough pears and apples for family use. Adapted to wheat, barley, corn, oats, and buckwheat. Wire fences in fair condition. Nine-room house in good condition. Grain barn, 36x60; good horse barn, 30x40; stock barn, 18x50, good condition; wood silo; hog house; hen house, condition good. House, barns and fields watered by wells. Farm occupied by owner. Price, $6,000. Terms, cash. Address Arthur L. Chase, owner, Venice Center, N. Y., R. F. D.

No. 83.— Farm of 173 acres; located 3 miles from Venice Center, on line of C. N. Y. & S. R. R.; 1 mile from school; 3 miles from churches and milk station; 2 miles from butter factory. Stone and gravel highways. Nearest city, Auburn, population, 32,468, distant 15 miles, reached by highway. General surface of farm, slightly rolling. Altitude, about 1,000 feet. Nature of soil, rich gravelly loam. Acres that can be used as meadow, 140; number now so used, 50; in natural pasture, 15; in timber, 10; mostly beech and maple, heavy. Acres tillable, 140. Fruit trees, 40 apple and all small Fruit for family use. Adapted to wheat, corn, barley, oats, and buckwheat. Wire fences in very fair condition. House, 12 rooms, good, built for two families. Grain barn, 32x70; horse and hay barn, 32x40; both in good condition; stave silo, 14x34; hog and hen house; corn house. House watered by well; barns by spring; fields by springs and streams. Farm now occupied by owner. Reason for selling, loss of wife. Price, $11,000. Terms, $6.500 cash, balance time. Address E. B. Nolan and Henry Nolan, Venice Center, N. Y., R. F. D. 60.

CHAUTAUQUA COUNTY

Area, 1,099 square miles. Population, 116,818. Annual precipitation, 39.09 inches. Annual mean temperature, 50.3°. Number of farms, 7,500. Average price of farm land per acre, $58.38. County seat, Mayville.

Located in the southwest corner of the State, bordering on the waters of Lake Erie.

The surface is mostly hilly and rolling upland. A bluff of 20 or 30 feet elevation extends along the lake front, and from its edge the land spreads out in an undulating region, gradually rising for a distance of three or four miles. This comparatively level tract is bordered by the declivities of a hilly upland which covers the central and southern portions of the county. These uplands are broken by deep valleys. The county is well watered, there being several small lakes in the highlands. The soil of the uplands is principally clay, mixed with disintegrated shale, generally known as flat gravel. In the valleys is found a fine quality of sandy and gravelly loam mixed with alluvium. Along the lake shore is a strip of very productive clay loam. The uplands of the county are all arable to their summits. This is the greatest grape producing county in the United States. The last census shows that 3,582 carloads of grapes, 1,225,000 gallons of grape juice and 750,000,000 gallons of wine were produced on the 35,000 acres of vineyard land. The other leading products are as follows: corn, shelled, 104,995 bushels; oats, 918,706 bushels; buckwheat, 110,719 bushels; barley, 26,992 bushels; wheat, 25,523 bushels; potatoes, 291,844 bushels; hay and forage, 163,289 tons. In respect to livestock the number of farms reporting domestic animals is 6,963, classified as follows: dairy cows, 41,526; horses, 14,939; swine, 14,459; sheep, 5,626; poultry, 387,683. There were produced 23,384,208 gallons of milk. The total receipts for sale of dairy products was $2,034,455. Valuation of all farm property is given as $43,738,499, an increase of 41.8 per cent in ten years.

The county is thoroughly equipped with lines of transportation, and has thirty-six miles of state road and 1,896 miles of improved highway. There are 277 district schools in the county besides the graded and high schools in the villages. These are all of the same high standing demanded by the State. Churches of all denominations are scattered throughout the county. There are forty agricultural organizations. The county ranks first in grapes, second in currants, and fourth in poultry.

TOWN OF BUSTI

Population 2,351

No. 84.— Farm of 152 acres; located 2½ miles from Busti P. O. and 7 miles from railway station at Jamestown on Erie R. R.; 1 mile from school and 2½ miles from churches and butter factory; 3½ miles from condensing plant and milk station. Highways, good, somewhat hilly. Nearest city, Jamestown, population 37,780, 7 miles distant. Surface, slightly rolling. Soil, clay loam. Acres in timber, 25, beech, maple and ash. Fruit, 140 apple trees, different varieties, some pears and grapes. Best adapted to hay, grain and potatoes. Fences, wire, good condition. House, 10 rooms. Outbuildings, 3 large barns, new silo and poultry house. Watered, house by well and cistern, barns by well, fields by springs. Occupied by owner. This farm is 4 miles from Chautauqua Lake. Price $5,500. Address John Morovchick, owner, Jamestown, N. Y., R. D. No. 79.

No. 85.— Farm of 30 acres; located 1 mile from Lakewood on line of Erie R. R.; 1 mile from school, churches and milk station. Highways, good. Nearest city Jamestown, population 37,780, 5⅜ miles distant, reached by state road and trolley. General surface, rolling. Nature of soil, clay loam. Acres used as meadow, 15; in natural pasture, 12; tillable, 25. Fruit, a few apple, pear, plum and peach trees, raspberry bushes and grape vines. Best adapted to fruit and grain. Fences, rail and wire, in fair condition. House, 30 x 36. Outbuildings, barn, 40 x 48, hog house, 10 x 12, and poultry house, 12 x 33. Watered, house and barns by well and fields by stream. Occupied by owner. Reason for selling, ill health. Price $5,000. Terms, $3,000 cash and remainder on mortgage at 5 % or $4,800 cash. Address Mrs. Mary Crosby Bliss, Jamestown, N. Y., R. D. 77.

No. 86.— Farm of 1¼ acres; located 4 miles from Jamestown on line of Erie R. R.; 1 mile from school and churches. Highways, good. Nearest city, Jamestown, population 37,780, 4 miles distant, reached by highway. General surface of farm, rolling. Nature of soil, gravel and loam. Acres in meadow, 20; in timber 20, maple; tillable, 80; fruit, 150 apple trees. Best adapted to hay, corn and oats. Fences, wire, in good condition. House, 10 rooms, in good condition. Outbuildings, cow barn, 45 x 46, horse barn, 40 x 26, hay barn, 16 x 24, hog house, 16 x 24 and granary, 12 x 16. Watered, house by well; barns by cistern and fields by springs. Occupied by owner. Reason for selling, old age. Price, $50 per acre. Terms, ½ down and balance on mortgage. Address J. D. Frank, Jamestown, N. Y., R. D. 80.

TOWN OF CHAUTAUQUA

Population 3,933

No. 87.— Farm of 47 acres; located ½ mile from Mayville P. O.; 1 mile from railway station at Mayville, on line of Penn. R. R.; ¼ mile from school; ½ mile from churches; about 3 miles from butter factory; ½ mile from milk station. State road now being built. Electric lights, village water and telephone. Nearest large village, Mayville, population, 1,201, reached by highway or trolley. Surface, rolling; easy grade; can all be worked. Soil, good. Acres in meadow, over 20; in natural pasture, about 20; in timber, about 7, beech and maple. Acres tillable, 30. Fruit, 50 apple trees, 150 grapevines (a good farm for grapes). Best adapted to hay and grain. Fences, wire and rail. House, 1½ stories, 1 story wing; 12 rooms. Six buildings on farm; horse barn, 22 x 30, in fair condition; cow barn, large enough for 8 head of cattle; poultry house, 1½ stories; hall 24 x 40, 2 stories; building 1½ stories. House watered by pump in kitchen; barns, from house. One mile from Chautauqua Lake. Highways on two sides of farm; trolley passes house. Can have natural gas for fuel. Occupied by tenant. Reason for selling, owner has other business. Price, $4,000. Terms, whole or half cash, balance on mortgage. Name and address of owner, M. F. Jacobsen, 501 East 6th Street, Jamestown, N. Y.

No. 88.— Farm of 133 acres; 2 miles from Hartfield P. O., R. D. 44, and railway station at Hartfield on line of Chautauqua Lake R. R.: ½ mile from school, 2 miles from churches; 1 mile from cheese factory; 2 miles to milk plant (state road). Highways, good, but hilly. Nearest village, Mayville, population, 1,201, distant 4 miles, reached by highways. Surface, pastures hilly, meadows level and rolling. Soil, black loam. Acres in meadow, 45; in natural pasture, about 55; in timber, 30 to 40, beech, maple, ash, basswood and cherry. Acres tillable, about 100. Fruit, a large number of apple trees, choice varieties; a few fine pear trees, few peaches and other fruit. Adapted to hay, corn, oats, etc. Fences, a few rail, the rest wire, in fair condition. House upright, 32x25; wing, 18x50. Outbuildings: barn, 40x50; stable, 40x50; horse barn, 25x30; corn barn, 20x20; all in good condition. Watered, house by well; barns and fields by spring and streams. Chautauqua Lake, 2 miles away. This farm is well watered, lying in a sheltered location with excellent timber and buildings in good condition. Occupied by tenant. Reason for selling, this property is owned and occupied by a widow and her daughter, who cannot conduct farm. Price, $6,000. Terms, one-half cash, balance on mortgage. Address, M. L. Mallery, owner, Hartfield, N. Y.

No. 89.— Farm of 200 acres; located 2 miles from Hartfield P. O., R. D., and railway station on line of Jamestown and Chautauqua R. R.; 1 mile from school; 2 miles from churches; 2 miles from milk station and condensing plant. Nearest village, Mayville, county seat, population, 1,201, 3 miles distant, reached by rail or highway. General surface, level, some side hill. Acres in meadow, 150; in pasture, 50; some timber, maple, beech, ash and elm. Acres tillable, 150. Fruit, orchard of 60 trees. Best adapted to corn, oats and potatoes. Fences, wire, good condition. House, poor condition. Outbuildings, large barn, small barn, 2 silos. House, watered by well, fields by brook and springs. View of Chautauqua Lake from house. Occupied by tenant. Possession given at any time. Reason for selling, owner in other business. Price, $8,000. Terms, $2,000, balance on easy terms. Address, H. J. Putnam, owner, Fredonia, N. Y.

No. 90.— Farm of 100 acres; located 3½ miles from Mayville P. O.; 1½ miles from railway station at Summerdale, on line of Pennsylvania R. R.; ½ mile from school; 3½ miles from churches and 1½ miles from milk station. Highways, nearly level. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 60; in natural pasture, 40; in timber, 10, hemlock, white ash, maple and beech. Acres tillable, 75. Fruit, 50 apple trees and 7 acres of grapes. Best adapted to fruit and general farming. Fences, wire, poor condition. 8 room house, poor condition. Outbuildings, barn, 24 x 30, needs some repairs, barn, 30 x 40, needs repairs. Watered, house and barns, by well; fields, by spring and stream. Chautauqua creek, ½ mile distant. Reason for selling, other business. Price, $3,000. Terms, $1,500 cash, balance on mortgage at 6 %. Address Andrew Mulholland, owner, Mayville, N. Y., R. D.

No. 91.— Farm of 175 acres; located 2½ miles from Dewittville P. O. and railway station, on line of J. W. & N. W. Electric Line; 1 mile from school; 2½ miles from churches; 1 mile from cheese factory and 3½ miles from milk station. Highways, good. Nearest village, Mayville, population, 1,201, 4 miles distant, reached by rail and highway. General surface, nearly level. Nature of soil, gravel loam. Acres that can be used as meadow, 125; in natural pasture, 20; in timber, 35; acres tillable, 130. Fruit, 50 apple and 3 pear trees. Best adapted to general farming. Fences, wire, good. Eight-room house, good condition. Outbuildings, barn, 30x70, good additions, 18x70, and 18x30; silo, 18x12; tool house, 20x30; all in excellent condition. Watered, house and barns, by wells; and fields, by springs and streams. Occupied by owners. Reason for selling, retiring. Price, $6,500. Terms, $2,500 cash, balance on mortgage. Address, Shafer Brothers, owners, Dewittville, N. Y., R. D.

TOWN OF CHERRY CREEK

Population 1,630

No. 92.— Farm of 50 acres; located 1 mile from Cherry Creek, on line of Erie R. R.; 1 mile from school and churches; 1½ miles from cheese factory; ¾ mile from milk station and 5 miles from condensing plant. Highways, level. Nearest city, Jamestown, population, 37,780, 20 miles distant, reached by rail. General surface, level. Altitude, 1,200 feet. Nature of soil, clay and muck. Acres that can be used as meadow, all; in natural pasture, 30. Acres tillable, 30. Fruit, a few apple trees. Adapted to hay, corn, cabbage and garden truck. Fences, wire and rail, in good condition. House, 8 rooms, in good condition. Outbuildings, barn, 30x68 and 20 foot posts; leanto 16x38, and poultry house, 10x20. Watered, house and barns, by well; fields, by brook. Reason for selling, ill health. Price. $10,000. Terms, ½ cash and remainder on mortgage. Address, J. W. Pickard, Forestville, N. Y.

No. 93.— Farm of 156½ acres; located ½ mile from postoffice; ¼ mile from railway station at Cherry creek, on line of Erie R. R.; ½ mile from school; ½ mile from Methodist, Baptist and United Brethern churches; 1¼ miles from cheese factory; 1¼ miles from milk station; 6¼ miles from condensing plant. Highways, level and good. Nearest city, Jamestown, population, 37,780, 21 miles distant, reached by rail and highway. General surface, level. Altitude, 1,200 feet. Nature of soil, loam and muck. 150 acres can be used as meadow, and 75 acres now so used; acres in natural pasture, 86½; in timber, 5, maple. Acres tillable, 75. A few apple trees. Adapted to hay, barley, oats and corn. Wire fences. Two good-sized houses, condition good. One horse barn nearly new, 40x44; 1 dairy barn, 40 x 108, 23 ft. to eaves; hen house. House watered by 250 ft. well; barns by creek; fields by spring and brook. This farm will keep 75 head of stock. Occupied by owner. Reason for selling, poor health. Price, $15,650. Located in high school district; population of village, 720. Address Grant D. Wheeler, owner, Cherry Creek, N. Y.

TOWN OF FRENCH CREEK

Population 941

No. 94.— Farm of 157 acres; located 5 miles from Clymer P. O., R. D. No. 58; 5¾ miles from railway station at Clymer, on line of P. R. R.; 30 rods from school; 1 and 2½ miles from churches; 2 miles from butter and cheese factories and milk station; 5 miles from condensery. Highways, state road. Nearest city, Corry, Pa., population, 8,000, 10½ miles distant, reached by highway. General surface of farm, rolling. Altitude, 1,400 feet. Nature of soil, gravelly and clay. Acres that can be used as meadow, 30; in natural pasture, 75; in timber, 40, beech, cherry, maple; much second growth. Acres tillable, 30. Best adapted to corn, hay, potatoes and oats. Fences, wire and rail. House, 26x18, with good cellar. Outbuildings: barns, 45x33, with 16 ft. shed; barn, 70x30, half of this has concrete floor for cows. House watered by wells; barns, by spring. French creek flows through farm. Occupied by owner. Price, $4,500. Terms, $1,500 cash, balance on installments. Good dairy farm; cows can be turned out earlier and later than farms on the hill. Address, Thomas H. and Mary Dwyer, owners, Clymer, N. Y.

TOWN OF HANOVER

Population 6,465

No. 95.— Farm of 200 acres; located 5 miles from Forestville P. O. and 3 miles from railway station at Smith's Mills, on line of Erie R. R.; 1/16 mile from school; ⅛ mile from churches; ⅛ mile from cheese factory; 3 miles from milk station, and 6 miles from powdered milk factory. Highways, good. Nearest city, Dunkirk, population 17,870, 14 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,100 feet. Soil, loam. Acres in meadow, 80; in natural pasture, 75; in timber, 45, maple, hemlock and beech; acres tillable, 150. Fruit, 50 apple trees. Adapted to grain of all kinds, hay and grapes. Fences, wire, in good condition. House, 2 stories, 35x35, good condition. Outbuildings, barn, 50x40, with silo and shed; barn, 35x40; barn, 20x30, all in good condition. Watered, house, by well; barns and fields, by springs. This farm is 7 miles from Lake Erie. Occupied by tenant. Reason for selling, to settle an estate. Price, $60 per acre. Terms, 40% cash, balance on time. Address J. L. Hurlbert, executor, 18 East Second St., Dunkirk, N. Y. Will rent.

No. 96.— Farm of 197 acres; located 3 miles from Forestville P. O., R. D., and railway station, on line of Erie R. R.; ¼ mile from school; 3 miles from churches of all denominations; ¼ mile from cheese factory; 3 miles from milk station; 6 miles from powdered milk factory. Highways, good. Nearest city, Dunkirk, population 17,870, 11

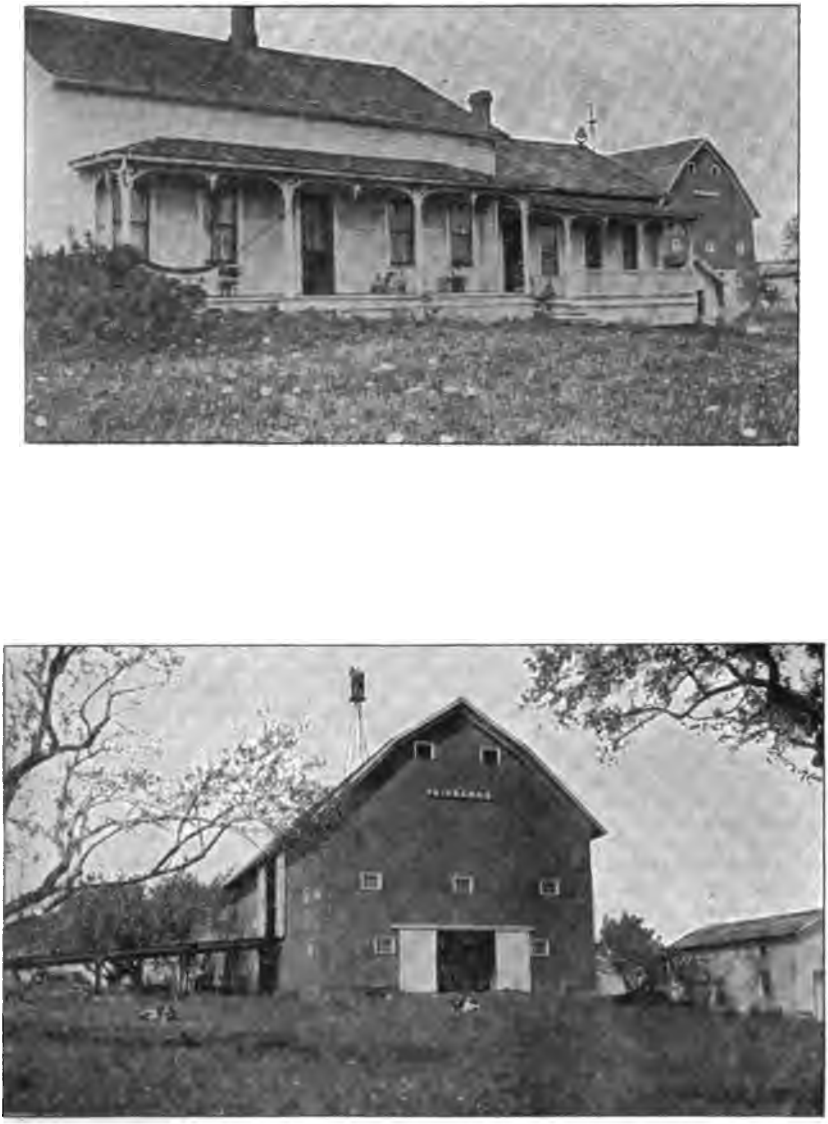


Fig. 5.— Buildings on Farm No. 104, Town of Westfield, Chautauqua County.

miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 80; in natural pasture, 80; in timber, 35, maple, hemlock and beech. Acres tillable, 160. Fruit, 50 apple trees. Best adapted to grapes, hay and grain. Fences, wire, in good condition. House, 35x30, 1½ stories, in fair condition. Outbuildings, large barn, with silo, 70x40; hay barn, 25x30; cow barn, all in good condition. Watered, house, by well; barns, by running water; fields, by springs. This farm is 7 miles from Lake Erie. Occupied by tenant. Reason for selling, to settle an estate. Price, $50 per acre. Terms, 40% down, balance on time. Address J. R. Hurlbert, executor. 18 East Second St., Dunkirk, N. Y. Will rent.

TOWN OF KIANTONE

Population 641

No. 97.— Farm of 282½ acres, located 5 miles from postoffice (R. D. No. 82) at Jamestown; 3 miles from railway station at Frewsburg, on lines of W. & J. S. and N. Y. C. railroads; ⅛ mile from school; 30 rods from church; 3 miles from condensing plant. Good highways. Nearest city, Jamestown, population, 37,780, distant 5 miles, reached by highways and part trolley. General surface of farm, rolling, and sloping to east. Altitude, about 1,300 feet. Nature of soil, clay, subsoil with some black loam. Acres that can be used as meadow, 100; acres now used as meadow, 75; in natural pasture, 82½; in timber, 100, mostly beech and maple, some second growth pine; number tillable, 100. About 40 apple trees, mostly Spy and Baldwin; 6 pear trees. Best adapted to hay, oats, cabbage, etc. Mostly wire fences. House of 10 rooms, large cellar; in good condition. Large barn, 90 feet; cow stable with cement floor, 60 ft.; wagon shed and granary; all in fair condition. House and barn watered by drilled well; fields by streams and springs. Farm now occupied by owner. Reason for selling, one son in army and other in college. Price, $40 per acre. Terms, $5,000 cash, balance mortgage. Address George C. Kidder, Jamestown, R. D. 82.

TOWN OF POLAND

Population 1,442

No. 98.— Farm of 223½ acres; located 4 miles from Frewsburg P. O., R. D. 84; 3½ miles from railway station at Falconer Junction, on line of Erie & D. A. V. & P. R. Rs.; 80 rods from school; 3 miles from churches; 4 miles from butter factory; 3 miles from milk station; 4 miles from condensing plant. Highways, good. Nearest city, Jamestown, population, 37,780, distant 6 miles, reached by highway and trolley. Surface of farm, meadows and upland. Soil, excellent. Acres in meadow, 100; in natural pasture, 123. Acres tillable, 100. Fruit, 30 trees. Adapted to almost all kinds of crops. Fences, wire and stumps. Houses, 2, in fair condition. Four barns and outbuildings. Watered, house, by pipes from spring; barns, by pipes from springs; and fields, by creek. Conewango Creek runs through meadows. Occupied by tenant. Tenant's lease includes agreement of release in case of sale of farm. Reason for selling, owner living at a distance too great to look after the farm personally. Price, $10,000. Terms, part cash, balance on mortgage if desired. Terms to be agreed upon. Address A. D. Betts, owner, Downing Avenue, Newburgh, N. Y. Owner will rent with option to buy.

TOWN OF POMFRET

Population 7,535

No. 99.— Farm of 200 acres; located 6 miles from Fredonia; 3 miles from Brocton, on line of L. S. & M. S. R. R.; 1¼ miles from school; 3 miles from churches and milk station; 2 miles from butter factory and cheese factory and 7 miles from condensing plant. Highways, good. Nearest village, Brocton, population, 1,292, 3 miles distant, reached by highway. General surface, rolling. Altitude, 700 feet. Nature of soil, gravel and muck. Acres that can be used as meadow, 50; in natural pasture, 150; in timber, 30, hard wood. Acres tillable, 60. Fruit, 10 pear and 100 apple trees. Best adapted to corn, oats and hay. Fences, wire, in good condition. House, 40x40, in good condition. Barn, 100x100. Watered, house by well; barns by springs; and fields by brook. Occupied by owner. Reason for selling, ill-health. Price, $10,000. Terms: ½ down and balance on mortgage. Address, James Rawson, Fredonia, N. Y.

TOWN OF RIPLEY

Population 2,482

No. 100.— Farm of 87 acres; located 5 miles from Ripley; 4 miles from Forsyth, on line of N. Y. C. R. R. and Lake Shore Trolley; ½ mile from school; 1

mile from churches; milk gathered at door by condensing company. Highways, good. Nearest large village, Westfield, population, 3,319, 8½ miles distant. General surface, sloping. Nature of soil, dark loam. Acres that can be used as meadow, 50; in natural pasture, 30; in timber, 10, mostly second growth. Acres tillable, 60. Fruit, about an acre of apple trees. Best adapted to hay, oats, corn and potatoes. Fences, mostly barbed wire. House, 1½ stories. Outbuildings, large barn. Watered, house and barns, by wells; fields, by creek and springs. Occupied by tenant. Reason for selling, old age. Price, $4,500. Terms, $4,300 cash or $1,000 cash and remainder on mortgage. Address, Hermon L. Kent, 72 S. Portage street, Westfield, N. Y. Owner will rent with option to buy.

No. 101.— Farm of 63 acres; located 3 miles from Ripley on N. Y. C. and N. Y., C., & S. L. R. Rs.; 1½ miles from school and churches. Highways, level and in good condition. Nearest village, Westfield, population, 3,319, 5 miles distant, reached by trolley. General surface, level. Nature of soil, clay loam. Acres in meadow, 15; in natural pasture, 3; tillable, 63. Fruit, 20 acres of apples and 23 acres of grapes. Best adapted to grapes, apples and peaches. Fences, wire, in good condition. House, 9 rooms. Outbuildings, 1 hay barn, 1 horse barn and a tool house. Watered, house and barns, by well; and fields by stream. Occupied by tenant. Reason for selling, to settle an estate. Price, $12,600. Terms, ⅛ cash and remainder on mortgage. Address, S. F. Nixon, Westfield, N. Y.

No. 102.— Farm of 150 acres; located 3 miles from Ripley on N. Y. C. & H. R. R. R.; 1½ miles from school and church. Highways, level, part state road. Nearest village, Westfield, population, 3,319, 5 miles distant, reached by trolley. General surface, level. Nature of soil, clay loam. Acres used as meadow, 50; in natural pasture, 10; tillable, 130. Fruit, 50 acres of grapes and some apple trees. Adapted to grapes, other fruit and general farming. Fences, wire and rail. House, 8 rooms, in good condition. Outbuildings: hay barn, horse barn, tool house and poultry house, also 2 gas wells. Watered, house and barns, by well; fields, by streams. Occupied by owner. Reason for selling, to settle an estate. Price, $21,750. Terms, part cash and remainder on mortgage. Address, S. F. Nixon, Westfield, N. Y.

TOWN OF SHERMAN

Population 1,732

No. 103.—Farm of 247½ acres; located 1 mile from Sherman P. O. and railway station on line of Penn. Ry.; 1 mile from high school; 1 mile from churches, butter factory and milk station; 1½ miles from condensing plant. Highways, in good condition. Nearest village, Sherman, population 949, reached by highway. General surface of farm, level and sloping. Nature of soil, loam and clay subsoil. Acres in meadow, 40; in pasture, 150; in timber, 57½, basswood, ash, cherry and maple; acres tillable, 150. Fruit, 20 apple, 5 cherry and 2 plum trees. Adapted to corn, hay, oats and potatoes. Fences, wire, in good condition. House, 12 rooms, gas lights, hot and cold water, bath room, in good condition. Outbuildings: barn, 40x150 with basement, concrete floors, swing stanchions, gas lights, large silo. Watered, house by running water; barns, same; fields, by creek. Occupied by tenant. Price, $20,000. Terms, ⅓ cash, 5% mortgage, easy payments. Farming tools, registered bull, 4 horses, and 35 cows go with farm. Address, W. J. Bement, owner, Sherman, N. Y.

TOWN OF WESTFIELD

Population 4,707

No. 104.— Farm of 180 acres; located 5 miles from Sherman P. O.; 4 miles from railway station at Ripley Crossing, on line of Lake Shore and M. S. R. R.; ¼ mile from school; country churches nearby; milk wagon passes farm; 3 to 5 miles from cheese factories. Good soil, very few stones. About ½ of farm tillable, ½ in natural pasture and timber, mostly hardwood. Fruit, part old and part new orchard, variety of trees. Adapted to general farm crops. Fences, mostly barbed wire. Large roomy farm house with two verandas. Outbuildings: barn 40x100 with addition; modern barn with silo; 100 ton hay barn; granary; basement stables. Watered by well, spring and creek. Concrete milk house with drilled well; drilled well in barn with windmill, also gasoline pumping outfit in milk house. Occupied by tenant. Reason for selling, owner retiring from business. Price, $6,500. Terms, safe payment down. Address Hermon L. Kent, owner, 72 South Portage Street, Westfield, N. Y.

No. 105.— Fruit farm of 24 acres; located about 1 mile from Westfield P. O. and railway station, on line of Lake Shore and Chicago and St. Louis R. R. and near Chautauqua & Lake Erie R. R. Center of Chautauqua and Erie grape belt. Fine churches and public schools, near Dunkirk, Erie and Buffalo, about 1½ miles from Lake Erie. The land for sale consists of about 16 acres of grapes, 3 acres of meadow, balance pasture. Has large red grape packing house which could be converted into a residence if desired or owner could live in town and work the place. Price, $4,500. Terms, safe payment down, balance, liberal time if desired. Reason for selling, owner is retiring from business and has several other places. Address Hermon L. Kent, owner, 72 South Portage St., Westfield, N. Y.

No. 106.— Farm of 24 acres; located 1 mile from Westfield, on line of Lake Shore R. R.; ½ mile from Westfield P. O.; 1 mile from school and churches. Surface of farm, level. Soil, gravel and loam. Acres that can be used as meadow, 11; tillable, all. Fruit, 9 acres of grapes, 1½ acres of cherries, large tract of currants, red raspberries, pears, peaches, apples and strawberries. Best adapted to fruit and berries. House, modern, 14 rooms, electric and gas lights, bath, furnace and all conveniences; 3 minutes walk from trolley. Outbuildings: good barn, electric lights, also cow barn, poultry house, etc. Watered, house and barn by city water. Lake Erie, 1 mile distant. Occupied by owner. Reason for selling, wish to retire. Price, $15,000. Terms, ½ or more cash. Address, A. H. Harris, owner, Westfield, N. Y.

CHEMUNG COUNTY

Area, 513 square miles. Population, 59,017. Annual precipitation, 33.74 inches. Annual mean temperature, 50.9°. Number of farms, 2,193. The value of all farm property is $10,288,587. Average price of farm land per acre, $33.56, which is a remarkably low price for good farm land. That the farmers of this county are prosperous is proved by an increase in the value of farm buildings of nearly $700,000 during the last ten years.

This is a lower tier county bordering on Pennsylvania and is one of the smaller counties of the state.

The surface is uneven and rolling, in some places being quite mountainous. The country along the river banks is level and alluvial and those flats are in some places extensive and exceedingly fertile. There is considerable timber on the more mountainous portions of the county. It is well watered by springs, creeks, ponds and the Chemung river. Along the broad valley of this river, tobacco is extensively grown, more being produced than in any other area of the size in the state. There are several streams tributary to the Chemung river whose valleys are bordered by steep hills with a soil of gravelly loam, intermixed in some places with clay. There are ample markets for all products of the county and the trunk lines of transportation give easy access to inexhaustible markets both in New York and Pennsylvania.

The leading crops are as follows: corn, shelled, 28,088 bushels; oats, 242,629 bushels; buckwheat, 75,812 bushels; potatoes, 102,371 bushels; hay and forage, 36,241 tons; tobacco, 2,903,700 pounds. Domestic animals are as follows: dairy cows, 9,186; horses, 4,661; swine, 3,791; sheep, 4,141; poultry, 106,556; total receipts for dairy products, $521,565; amount of milk produced, 5,539,750 gallons. There are 111 district schools, a college located at Elmira, where is also one of the New York State reformatory institutions and the Erie Railroad car shops which employ a large number of workmen.

TOWN OF BALDWIN

Population 539

No. 107.— Farm of 385 acres; located 10 miles from Elmira; 5 miles from railway station at Erin, on line of Lehigh Valley R. R.; R. D. 2 from Lowman; 1½ miles from school and Baptist church; 1 mile from butter factory; 9 miles from milk condensing plant. Highways, good. Surface of farm, rolling and level. Soil, clay and sub-soil. Acres in meadow, 100; in natural pasture, 200; in timber, 85, hemlock, ash, basswood, maple and beech; acres tillable, 300. Fruit: apples, pears, cherries, plums and peaches. Adapted to oats, barley, buckwheat, potatoes and wheat. Fences: rail, stone and wire, fair condition. House, 28x32; ell, 18x22, 13 rooms, good condition. Outbuildings: cow barn, 50x24; underground stables, 30x40 with shed, 100x16; silo; barn, 26x52 with shed, 80x16; barn, 30x40; sheep barn, 10x24; horse barn, 20x30, with stables, 12x16. Watered, house, by well; barns, by springs and well; fields, by springs. Occupied by owner. Reason for selling, advanced age and ill health of owner. Price, $6,500. Terms, one-half cash, balance on time. Address Fox or Levi Little, owners, Lowman, N. Y., R. D. 1.

No. 108.— Farm of 210 acres; located 4 miles from Lowman post office, R. D. 1; 4 miles from railway station at Lowman, on line of D. L. & W. R. R.; ¼ mile from school and Union church; 5 miles from milk station and condensing plant. Highways, district and state road. Nearest city, Elmira, population, 40,093, 10 miles distant, reached by rail, trolley and highway. General surface of farm hilly. Soil, clay. Acres that can be used as meadow, 100; acres now used as meadow 40; in natural pasture, 100; in timber, 26, second growth. Acres tillable, 190. Fruit trees: apple, pear, plum, peach and grapes. Adapted to all kinds of crops. Wire and rail fences, fairly good. Two houses, one 2 stories of 8 rooms; second 1½ stories of 9 rooms. Three barns, 2 with sheds; 1 with wagon house; 1 barn with concrete cow stables. House watered by running water and 1 well; barns by running water; fields by springs. Two miles from Chemung river. Occupied by tenant. Reason for selling, old age. Price, $5,000. Terms, $2,000 cash, balance on easy terms. Will rent on shares, or with option to buy. Can be divided into two farms, one of 150 acres and the other 60 acres; good buildings on each. Address Mrs. Abbie Brown, 104 East Hudson St., Elmira, N. Y.

TOWN OF CATLIN

Population 834

No. 109.— Farm of 64 acres; located 5 miles from postoffice, R. D. 2; 1 mile from railway station at Post Creek, on line of N. Y. Central railway; 1 mile from school; 2 miles from Methodist church; 6 miles from condensing plant. Highways, good, part macadam. Nearest village, Horseheads, population, 1,949, 8 miles distant. General surface of farm, rolling. Nature of soil, loam. Acres that can be used as meadow, 50; acres now used as meadow, 5; in timber, 14, chestnut; acres tillable, 50. Fruit trees: King, Greenings, Talmons, Wine apple, sweets. Adapted to buckwheat, oats, rye, potatoes. Wire and rail fences in fair condition. House, 16x24. Barn, 30x44, with basement. House watered by well; fields, by creek and springs. Reason for selling, owner unable to work it himself. Price, $1,000. Terms, $300 cash, rest on time. Will rent on shares or with option to buy. Address John R. Cooper, owner, Horseheads, N. Y., Box 529.

No. 110.— Farm of 150 acres; located 5 miles from postoffice (R. D. No. 2); 1 mile from railway station at Post Creek, on line of N. Y. Central R. R.; 1½ miles from school; 3 miles from Methodist church; 7 miles from condensing plant. Highways, good, part macadam. Nearest village, Horseheads, population, 1,949, 9 miles distant, reached by highway. General surface of farm, level. Nature of soil, loam. Acres that can be used as meadow, 100; acres now so used, 50; in timber, 20, chestnut. Acres tillable, 130. Adapted to hay, potatoes, oats, rye, buckwheat. Rail and wire fences. House, 26x30. No barn. House watered by spring; fields, by springs. Occupied by tenant. Reason for selling, owner can not work farm himself. Price, $1,500. Terms, $500 cash, rest on time. Will rent on shares, or with option to buy. Address John R. Cooper, owner, Horseheads, N. Y. Box 529.

No. 111.— Farm of 129½ acres; located 9 miles from Horseheads postoffice (R. D. No. 4); 1½ miles from railway station at Post Creek, on line of N. Y. Central R. R.; 30 rods from school; 3 miles from church; 3 miles from condensing plant. Highways, good, dirt road. Nearest village, Horseheads, population, 1,949, 9 miles distant, reached by rail and highway. Four fields on side hill but all plowed up and down. Nature of soil, clay loam. Acres that can be used as meadow, 94; acres now used as meadow, 80; in timber, 35½, chestnut, oak, maple, hemlock Acres tillable, 94. Fruit trees, 20 apple, 2 peach, 5 pear, 7 plum, 9 cherry, grapes 4. Adapted to oats, buckwheat, corn, (No. 1 potato), hay, beans. Wire stone and

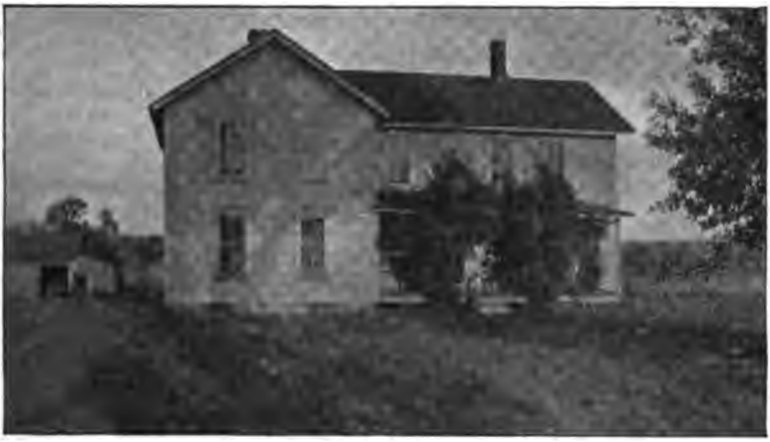


FIG. 6.— HOUSE ON FARM NO. 94, TOWN OF FRENCH CREEK, CHAUTAUQUA COUNTY.

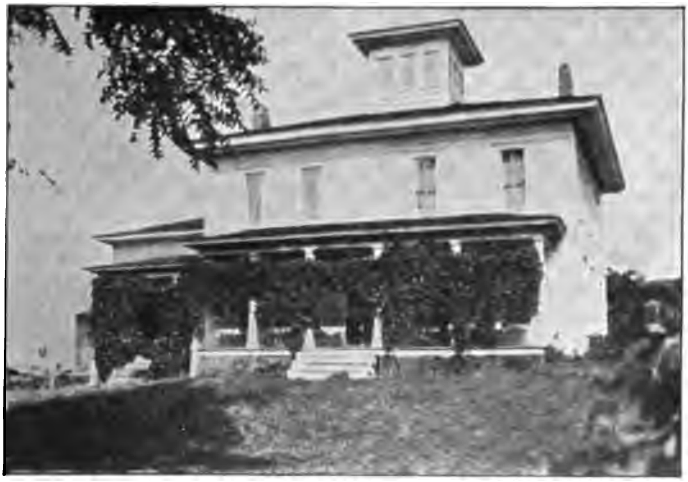


FIG. 7.— HOUSE ON FARM NO. 107, TOWN OF BALDWIN, CHEMUNG COUNTY.

rail fences in fair condition. Good 14-room house. Barn, 42x60, basement, wagon room, stable all in good condition; sheep barn, 20x30; hog house, 20x30; hen house, 12x20; blacksmith shop, 16x20. House watered by well in the well room, 4 ft. from kitchen; barn watered by wind mill; fields, by spring. Now occupied by tenant. Reasons for selling, owner too old to work and children all married. Price, $3,000. Terms, one-half down, balance to suit purchaser. This farm is a money maker for a man with health and willing to work; owner has always asked $4,000 but wishes to sell. Address H. F. Van Order, Horseheads, N. Y.

No. 112.— Farm of 200 acres; located 5 miles from Horseheads postoffice (R. D. No. 4); 5 miles from railway station at Horseheads, on line of Pennsylvania R. R.; ½ mile from school; 2 miles from Methodist church; 5 miles from butter factory; 4 miles from milk station and condensing plant. Highways, macadam 3 miles, dirt road 2 miles. Nearest city, Elmira, population, 40,093, distant 12 miles, reached by macadam road 10 miles, dirt 2 miles. General surface of farm, rolling. Altitude 1,500 feet. Nature of soil, clay loam. Acres that can be used as meadow, 150; acres now used as meadow, 50; in natural pasture, 75; in timber, 25, second growth oak and chestnut. Acres tillable, 175. Fruit, 30 apple, a few pears, cherries and plums. Adapted to hay, oats, buckwheat, potatoes. Practically no fences. Seven-room house in need of repair. One barn, 30x40, in good condition; one barn, 30x40, and two sheds 16x50, needing repairs. House watered by well; barns and fields, by springs. Chemung river, 5 miles distant. Occupied by owner. Reason for selling, owner has another farm and cannot work both places. Price, $2,000. Terms, one-half cash, balance on time. Any quantity of fence post timber on farm; good productive soil, but has been neglected. Address Horace B. Owen, owner, Beaver Dams, N. Y.

TOWN OF CHEMUNG

Population 1,383

No. 113.— Farm of 50 acres, located ¼ mile from postoffice and ½ mile from railway station at Chemung, on line of Erie R. R.; ¼ mile from school and churches; ½ mile from milk station and cheese factory. Highways, hard road, generally level. Nearest village, Waverly, population, 5,119, distant 4½ miles, reached by highway, steam and electric railways. Surface of farm, level. Altitude, 1,000 feet. Nature of soil, loam. Acres that can be used as meadow, 40; in natural pasture, 10; number tillable, 45. Plenty of fruit for family use. Adapted to all crops. Good wire fences. Good house, 8 rooms, water in kitchen. Barns, 30x40 and 30x60, painted, in good condition; poultry houses, 15x60 and 15x20; hog house; wood house. House watered by cistern and well; barns by springs; fields by springs. Chemung river, one mile distant. Farm now occupied by owner. Price, $5,500. Terms, half cash. Address W. J. Hustis, Chemung, N. Y.

TOWN OF ERIN

Population 840

No. 114.— Farm of 130 acres; located 1 mile from P. O.; ¾ mile from railway station at Swartwood, on line of L. V. R. R.; 1 mile from school and Methodist church; ½ mile from butter factory; 3½ miles from milk station. Nearest village, Van Etten, population, 407, 4 miles distant; Elmira, population, 40,093, 19 miles distant, reached by rail and highway. Surface, partly hilly. Soil, clay and loam. Fruit, 60 or more apple trees. Adapted to hay, buckwheat, potatoes and dairying. Fences, board, rail and wire, poor condition. 2 barns, 30x40. Watered, barns, by brook; fields, by brook and spring. State road passes through farm. Unoccupied. Reason for selling, death of owner. Price, $2,500. Terms, part cash. Address, Sophie A. White, 58 Port Watson street, Cortland, N. Y.

TOWN OF HORSEHEADS

Population 6,033

No. 115.— Farm of 200 acres; located 4 miles from Horseheads P. O., R. D. No. 3, and railway station, on line of Erie, D., L. & W., Penna. & Lehigh R. Rs.; 1½ miles from school; 4 miles from churches, butter factory, cheese factory, milk station and condensing plant. Highways, state road. Nearest city, Elmira, population 40,093, 10 miles distant, reached by rail or highway. General surface, level. Nature of soil, yellow loam and gravel. Acres that can be used as meadow, 150. Acres tillable, 190. Fruit, large apple orchard. Best adapted to rye, oats, buckwheat and hay. Fences, good. Houses, one 12 rooms and one 8 rooms, good condition. Good barns. House, watered by running water, barns by well, fields by springs. Occupied by owner. Reason for selling, to settle an estate. Price, $6,000. Terms, cash. Address Lewis Breese, owner, Horseheads, N. Y.

No. 116.— Farm of 65 acres; located 4 miles from Elmira; 1½ miles from Horseheads on line of Erie and D. L. & W. R. R.s.; ½ mile from school; 1 mile from churches and milk station; 4 miles from butter factory; 6 miles from condensing plant. Highways, state road. Nearest city, Elmira, population, 40,093, 4 miles distant, reached by trolley and highway. General surface, rolling. Nature of soil, gravel and clay loam. Acres that can be used as meadow, 57; in natural pasture, 10; in timber, 8, oak. Acres tillable, 57. Best adapted to potatoes, oats and wheat. Fences, wire. No house or barns. Fields watered by springs. Occupied by owner. Price, $6,000. Terms, ½ cash and remainder on mortgage. Address, John McCann, Elmira, N. Y.

TOWN OF VETERAN

Population 1,470

No. 117.— Farm of 179 acres; located 4 miles from Horseheads P. O., R. D.; 2 miles from railway station at Pine Valley, on line of Pennsylvania R. R.; school adjoins farm; ½ mile from Baptist church, and 4 miles from butter factory. Highways, dirt road, good condition. Nearest large village, Horseheads, population 1,948, 4 miles distant, reached by highway. General surface of farm, rolling. Nature of soil, gravel loam. Acres that can be used as meadow, 100; in natural pasture, 35; in wood, 25. Acres tillable, 125. Fruit: apples, pears, plums and cherries. Best adapted to corn, oats and hay. Fences, woven wire, good condition. House, ample size, good condition, newly roofed. Large barn with cow stables in basement. House and barns watered by running water, and fields by springs and streams. Occupied by tenant. Reason for selling, other business. Price, $10,500. Terms, half cash, balance on mortgage. For $2,000 more, 30 head of stock and tools can be purchased. Will rent with option to buy. Farm is located on milk route, bell phone, and is 10 miles from Elmira, population 40,093. Address Harvey J. Couch, owner, Odessa, N. Y.

CHENANGO COUNTY

Area, 898 square miles. Population, 36,648. Annual precipitation, 56.23 inches. Annual mean temperature, 47.4°. Number of farms, 4,258. Average price of farm land per acre is $27.63. With an increase of nearly $2,000,000 in the value of farm buildings alone there must be prosperity among the farmers and it seems inevitable that land values should show a decided increase during the next few years.

This is one of the interior counties lying southeast of the center of the state.

The surface is elevated and in some places broken and hilly. Two broad and deep valleys traverse the county from north to south. The bordering ridges are subdivided by numerous lateral and some parallel valleys. The summits of these ridges are broad and rolling with an elevation of 300 to 800 feet. There is considerable timber on this upland. Streams, brooks, and springs abound throughout the county and furnish abundant water for villages and farms. Tully limestone and Genesee slate and sandstones are found in the southern part of the county. The sandstone quarries furnish good material for building and flagging. Grindstones and whetstones are quarried near Oxford.

The soil of the county is almost entirely derived from the disintegration of the rocks and is strong and productive. The D., L. & W.; N. Y., O. & W. and D. & H. railroads give ample, cheap and quick transportation of all farm products to the great markets of the state. Dairying is the great industry and the production was 29,919,490 gallons of milk; receipts from the sale of dairy products, $2,957,886. There are fifty-eight milk stations and factories in this county. The leading crops grown were: corn, shelled, 36,397 bushels; oats, 480,100 bushels; barley, 8,385 bushels; buckwheat, 46,354 bushels; potatoes, 233,860 bushels; hops, 69,749 pounds; hay and forage, 154,927 tons. The value of all farm property is $20,912,000, an increase of 19.2 per cent. in ten years.

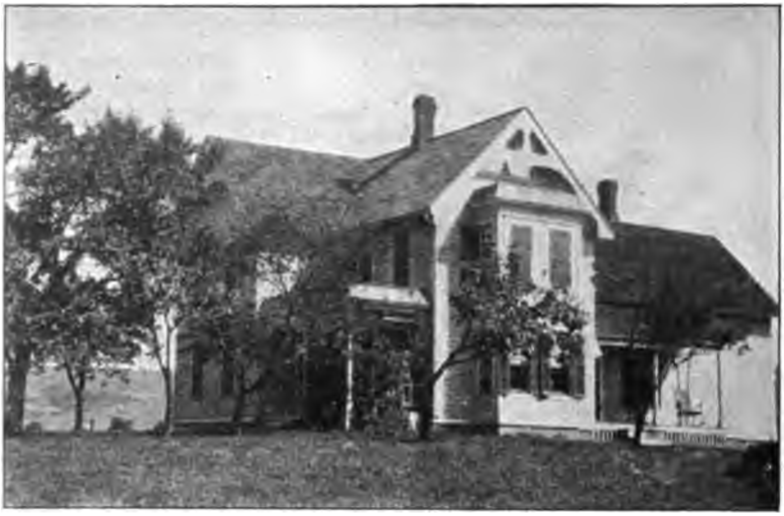


FIG. 8.— HOUSE ON FARM NO. 113, TOWN OF CHEMUNG, CHEMUNG COUNTY.

FIG. 9.— HOUSE ON FARM NO. 124, TOWN OF COVENTRY, CHENANGO COUNTY.

Chenango is an excellent fruit county; some of the famous apples originated in this county, notably the Chenango strawberry apple. There are churches of all denominations located in the rural districts, and the 355 district schools, graded and high schools in villages furnish ample educational facilities. There are 1,661 miles of improved highway and 54 miles of state road.

TOWN OF AFTON

Population 1,809

No. 118.— Farm of 151 acres; located 3½ miles from Harpursville P. O.; 2½ miles from railway station at Harpursville on D. & H. R. R.; ½ mile from school; 3½ miles from churches and 2½ miles from milk station. Highways, good. Nearest city, Binghamton, population 53,668, 23 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, shale and loam. Acres in meadow, 45; in natural pasture, 81; in timber, 25, maple, birch and beech; tillable, 100. Fruit, 90 apple and 10 pear trees. Adapted to corn, oats, wheat, buckwheat and potatoes. Fences, board, wire and rail in fair condition. House, 12 rooms in fair condition. Outbuildings: barn, 30x60, basement barn, 26x36, corn house and granary, 12x16, shed, 12x30, and milk house, 6x8. Watered, house, by well; barns, by spring; and fields, by stream. Occupied by tenant. Reason for selling, other business. Price, $2,800. Terms, $1,000 cash and remainder on mortgage. Address, H. W. Wedge, Jersey Shore, Pa.

TOWN OF BAINBRIDGE

Population 2,004

No. 119.— Farm of 300 acres; located 1½ miles from Bainbridge P. O.; 1½ miles from railway station at Bainbridge, on line of D. & H. R. R.; 40 rods from school; 1½ miles from churches, butter factory and milk station. Highways, hilly, but good. Nearest city, Binghamton, population 53,668, 32 miles distant, reached by rail and state road. Surface of farm, part level and part rolling. Soil, dark loam. Acres in meadow, 100; in natural pasture, 100; in timber, 40, oak, chestnut and pine. Fruit, 50 apple trees, Adapted to hay, corn, oats, and potatoes. Fences, wire and rail, good condition. Large 2 story house, 20 rooms and porch in good condition. Outbuildings: large basement barn, 60x40, concrete basement; horse barn; hay barn; corn house and milk house. House, watered by spring; barns by springs; fields, by brooks. Occupied by owner. Reason for selling, old age. Price, $9,500, without timber. Terms, $500 cash, balance on mortgage. Address D. J. Baker, owner, Bainbridge.

TOWN OF COLUMBUS

Population 794

No. 120.— Farm of 200 acres, 5 miles from Sherburne P. O. and New Berlin P. O., R. D. 1, on line of D., L. & W. and O. & W. R. Rs.; ¾ mile from school; 1½ miles from churches and milk station; 5 miles from condensery. Highways, good. Nearest city, Norwich, population 8,342, 16 miles distant. Surface, rolling. Soil, gravelly loam, good. Acres in meadow, 50; natural pasture, 125; timber, 25, beech, birch, and maple; acres tillable, 175. Fruit, 50 apple and 10 pear trees. Adapted to dairying, potatoes, corn, oats and buckwheat. Fences, wire, in good condition. House, 30x45, needs some repair. Three barns: one, 30x60, with basement, in good condition; one, 30x40; one, 20x30. Watered, house by well; barns by springs; fields by springs and brooks. Occupied by tenant. Rented for one year with privilege of selling. This farm is on the main road from Sherburne to New Berlin. A first-class dairy farm, very productive. Reason for selling, age and poor health of owner. Price, $2,500. Terms, $500 down, balance on bond and mortgage. Address E. C. Bryant, owner, Sherburne, N. Y., R. D. 1.

No. 121.— Farm of 145 acres; located 9 miles from New Berlin P. O., R. D. 3; 3 miles from railway station at Sweets, on line of Unadilla Valley R. R.; ¾ mile from school; 2½ miles from Baptist church; 5 miles from butter factory, cheese factory and milk station; 9 miles from condensing plant. Highways, good. Nearest village, New Berlin, population, 1,131, 9 miles distant, reached by highway. Surface of farm, part rolling, part level, part hilly. Altitude, 1,600 feet. Soil, gravel and loam. Acres in meadow, 40; in natural pasture, 60; in timber, 45, basswood, ash, maple and beech; acres tillable,

80. Fruit, 5 acres of apples, 5 kinds of pears. Best adapted to dairying. Fences, stone wall, rail and wire, in good condition. House, 84x24, well painted, slate roof, 2 stories, observatory on top, 20 rooms, large cellar, furnace, and a conservatory, in good condition. Barn, 30x40; barn, 20x30; stable, 43x21; shed, 40x20; crib, 12x18; poultry house, 12x24; 2 shops. Watered, house by well; barns, by well, lead pipe to trough; fields, by 3 springs and brook. Occupied by tenant. Reason for selling, to settle an estate. Price, $3,000. Terms, $1,500 cash, balance on mortgage. Address F. J. Tuttle, owner, Norwich, N. Y.

No. 122.— Farm of 250 acres; located 8 miles from New Berlin P. O., R. D. No. 4; 3½ miles from railway station at South Edmeston, on line of Unadilla Valley R. R.; ½ mile from school; 2 miles from church; 3½ miles from butter factory; 4 miles from cheese factory; 3½ miles from milk station and 8 miles from condensing plant. Acres that can be used as meadow, 200; in pasture, 70; in timber, 50, ash, beech and maple. Acres tillable, 200. Fruit, apples. Best adapted to dairying, hay and stock farm. Fences, stone wall and wire, good condition. House, 2 stories, 9 rooms, built 7 years ago. Outbuildings, cow barn, 36x100; horse barn, 30x20, stone basement; silo; corn crib and poultry house. House watered by running water; barns, by springs. Occupied by owner. Price, $5,000. Terms, ¼ cash, balance to suit purchaser. Reason for selling, old age. Address Frank Whitten, owner, New Berlin, N. Y., R. D. No. 4. Owner will rent.

No. 123.— Farm of 71 acres; located 8 miles from New Berlin postoffice (R. D. No. 4); 1½ miles from railway station at Sweets, on line of Unadilla Valley railway; ½ mile from school; 2 miles from Free Baptist church; 4½ miles from butter and cheese factory and milk station, and 8 miles from condensing plant. Highways, good. Nearest village, New Berlin, population, 1,131, distant 8 miles, reached by highway and railroad. General surface of farm, part rolling, part level. Altitude, 1,200 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; acres now so used, 36; in natural pasture, 25; in timber, 10, maple and beech. Acres tillable, 40. One-half acre in orchard. Adapted to hay, corn and oats, also dairying. Wire and board fences in good condition. House, upright 25x18; wing, 20x20 ft., 8 rooms, house painted. Barns, 30x60; 20x34; hen house, 16x18; no basement, but good roofs and in good repair. House watered by well; barns by brook in back of barn; fields by springs and brooks. Unadilla river, 1½ miles distant. Now occupied by tenant. Reason for selling, other business. Price, $2,500. Terms, $1,000 cash, balance on bond and mortgage. Address Mrs. J. M. Ladd, owner, New Berlin N. Y.

TOWN OF COVENTRY

Population 793

No. 124.— Farm of 187 acres; located ¼ mile from Coventry P. O., and 5 miles from Coventry railway station, on line of D. L. & W. R. R.; ¼ mile from school, churches and milk station. Highways, level and good. Nearest city, Binghamton, population 53,668, 20 miles distant, reached by rail and highway. General surface of farm, slightly rolling. Nature of soil, loam surface, clay subsoil. Acres that can be used as meadow, about 90; in natural pasture, 100; in timber, 17, hardwood, good. Acres tillable, 170. Fruit, 60 apple trees of standard varieties. Adapted to hay, corn, oats, dairying and general farming. Fences, mostly wire, good condition. House, 14 rooms, fair condition. Outbuildings: basement barn, 36x72; wagon house, 40x40; storage barn, 30x40; granary, 12x24, and poultry house, 14x28. House and barns watered by wells; fields, by stream. Occupied by owner. Reason for selling, owner unable to work it. Price, $20 per acre. Terms, reasonable. Will rent with option to buy. Address E. A. Kark, owner, Coventry, N. Y.

No. 125.— Farm of 280 acres; located 2 miles from Coventry on line of D. & H. R. R.; ¼ mile from school and 2 miles from church. Highways, good. 2 miles from milk station. Nearest city, Binghamton, population 53,668, 18 miles distant, reached by rail or highway. General surface, rolling. Quality of soil good. Acres in meadow, 80; in natural pasture, 150; in timber, 50, oak, ash, hemlock, pine, maple and beech; tillable, 200. Fruit, 50 apple trees. Best adapted to potatoes, oats, buckwheat and hay. Fences, wire, in good condition House, 10 rooms, in good condition. Outbuildings, dairy barn, 40x72; horse barn, 30x40; hog house, granary and poultry house. Watered, house and barns, by running water; fields, by stream. Occupied by tenant. Reason for selling, death in family. Price, $6,500. Terms, ⅓ cash and remainder on mortgage. Address Mrs. Guy D. Wylie, Afton, N. Y.

TOWN OF GREENE

Population 2,959

No. 126.— Farm of 150 acres; located 5 miles from Greene on line of D. L. & W. R. R.; ½ mile from school; 2 miles from churches, butter factory and cheese factory, and 5 miles from condensing plant. Highways, dirt, level and some hills. Nearest city, Binghamton, population 53,668, 22 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam and clay. Acres that can be used as meadow, 100; in natural pasture, 50; in timber, about 35, chestnut, oak, maple, poplar and hemlock. Acres tillable, 120. Fruit, apples. Adapted to oats, potatoes, corn, hay, wheat and buckwheat. Fences, wire, in fair condition. House, 6 rooms, about 26x36. One barn, 26x36, in fair condition; barn, 16x24, in poor condition, and a poultry house. Watered, house by well; barns near spring; fields, by springs and brook. Occupied by owner. Reason for selling, ill health. Price $1,300. Terms, ½ cash and remainder on mortgage or $1,200 cash. Address, F. L. Maine, Willet, N. Y.

TOWN OF GUILFORD

Population 1,963

No. 127.— Farm of 114 acres; 4 miles from Bainbridge P. O. and railway station, on line of D. & H. R. R.; ½ mile from school; 4 miles from 5 churches; R. D. 3 from Bainbridge. Good roads. 3 miles from milk station and 4 miles from condensing plant. Nearest village, Bainbridge, population, 1,201, distant 4 miles, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 40; in natural pasture, 54; in timber, 20, hemlock, pine, chestnut and hard wood; acres tillable, 94. Fruit, 5 plum, 4 pear, 35 apple trees, 2 grapevines, also currants and berries. Adapted to all crops. Fences, wire and rail, in fair condition. House, 20x26, and ell, 18x36, 2 stories, good condition, new. Barn, 24x60, leanto, 14x68, granary, two poultry houses, toolhouse and shop. Watered, house, by running water and 2 wells; barns, by running water; fields, by brook and springs. Reason for selling, wife is dead. Price, $3,000. Terms, ½ down, balance on mortgage. Address, O. L. Yale, owner, Bainbridge, N. Y., R. D. 3.

TOWN OF MCDONOUGH

Population 825

No. 128.— Farm of 150 acres; located 1¼ miles from McDonough; 10½ miles from Oxford on line of D., L. & W. R. R.; 1½ miles from school, churches, butter factory and cheese factory. Highways, state road. Nearest village, Oxford, population 1,594, 10½ miles distant, reached by highway. General surface, rolling. Nature of soil, good. Acres that can be used as meadow, 50; in natural pasture, 100. Acres tillable, 50. Fruit, apple orchard. Best adapted to hay, oats, corn and potatoes. Fences, wire and stone. House, 27x35 with kitchen addition. Outbuildings, basement barn 36x80, 100-ton tile silo, hog house, horse barn, garage and poultry house. Watered, house, by spring; fields, by spring and brook. Occupied by owner. Reason for selling, too much land. Price, $6,000. Terms, $2,000 cash and balance on mortgage. Address DeVer Lidell, McDonough, N. Y.

TOWN OF NEW BERLIN

Population 2,442

No. 129.— Farm of 150 acres; located ¾ mile from New Berlin P. O., R. D. No. 4; 1 mile from railway station at New Berlin, on line of N. Y., O. & W. and Unadilla Valley Rys.; 50 rods from school; 1 mile from churches, creamery and milk station; 2 miles from condensing plant. Nearest city, Norwich, population 8,342, 14 miles distant, reached by rail or highway. State road being constructed. Five acres timber and balance meadow and pasture. Houses, one, 3 stories, slate roof, 20x60; the other, 24x30, 1½ stories, both in good repair. Barns, 30x60, 26x30 and 30x40, with basements in good condition. Fences, good. Have sold $3,300 worth of milk in one year. Occupied by owner and tenant. Price, $15,000. Terms, ½ cash, balance on time; will make a good investment at price named. Address Crandall Bros., owners, New Berlin, N. Y.

TOWN OF NORWICH

Population 1,201

No. 130.— Farm of 345 acres; located 4 miles from railway station at Rockwells Mills, on line of N. Y., O. & W. R. R.; ¾ mile from school; 1 mile from churches; 2 miles from butter and cheese factory. Nearest city, Norwich, population 8,342, 6 miles distant, reached by highway. General surface of farm, 20 acres flat, balance rolling. Acres that can be used as meadow, 325; in natural pasture, 165; in timber, 80, beech and maple, and 200,000 feet of basswood. Best adapted to corn, oats and hay. Apples and other fruit. 12 room house. Cow barn 96x28; wagon house; hop house and hay barns, 50x28, 26x26, 50x28 and 16x14. Watered by springs. Fences, wire and rail, in fair condition. 2 condensing plants, located convenient to farm, or milk can be shipped to New York. New silo, 14x28. 40 or 45 cows go with farm if desired. Occupied by tenant. Reason for selling, old age. Price, $22 per acre. Terms, reasonable payment down, balance to suit purchaser. Address S. K. Wood, owner, 27 Hayes Street, Norwich, N. Y.

No. 131.— Farm of 120 acres; located 4 miles from postoffice at South New Berlin R. D. No. 2; ¼ mile from railway station at White Store, on line of O. & W. R. R.; ¼ mile from school; 2 miles from church, butter and cheese factories; 4 miles from milk station and condensing plant. Good highways. Nearest city, Norwich, population, 8,342, distant 8 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil, loam. Acres that can be used as meadow, 70; acres now used as meadow, 40; in natural pasture, 50; in timber, 30, hemlock and hardwood. Acres tillable, 70. Fruit, 30 apple trees, 7 pear, 2 plum, 3 cherry; grapes. Best adapted to corn, oats and potatoes. Good wire fences. House of 17 rooms in good condition. Two barns, 30x40, in fair condition. House watered by piped spring and well: barn, by pipe from spring; fields, by springs. Unadilla river forms eastern boundary of farm. Farm now occupied by owner. Reason for selling, to settle estate. Price, $5,000. Terms cash. Address Miss Josephine Myers, South New Berlin, N. Y.

TOWN OF PHARSALIA

Population 699

No. 132.— Farm of 90 acres; located 2 miles from North Pharsalia P. O., and 9 miles from railway station at Cincinnatus, on line of D., L. & W. R. R.; 1 mile from school; 2 miles from churches, butter factory, cheese factory, and 14 miles from condensing plant. Highways, good state road part of the way. Nearest city, Norwich, population 8,342, 14 miles distant, reached by highway. General surface, level and sloping. Altitude, 1,700 feet. Nature of soil, loam. Acres that can be used as meadow, 60; in natural pasture, 30; in timber, small grove of maple. Acres tillable, 75. Fruit: pears, apples, plums, cherries and currants. Best adapted to corn, potatoes and small grains. Fences, wall and wire, in good repair. House, 13 rooms, with good roof, newly painted. Outbuildings: good basement barn, good horse barn with concrete floor, and poultry house with concrete floor. Watered, house by running water, barns by same, fields, by never failing springs. Splendid trout stream runs through farm. Occupied by owner. Reason for selling, old age. Price, $2,900. Terms, easy. $900 cash, balance on mortgage at low rate of interest. Address Carlos Atkyns, owner, North Pharsalia, N. Y., Box 30.

No. 133.— Farm of 122 acres; located ½ mile from North Pharsalia; 12½ miles from Norwich on line of D. L. & W. R. R.; ½ mile from school, church, butter factory and cheese factory; 12½ miles from milk station and condensing plant. Highways, state and dirt roads. Nearest city, Norwich, population 8,342, 12½ miles distant, reached by highway. General surface, rolling. Nature of soil, light loam. Acres in meadow, 30; in natural pasture, 65; in timber, 20, suitable for fire wood; tillable, 35. Fruit: apples and pears. Best adapted to corn, potatoes, oats and buckwheat. Fences, stone and wire, in fair condition. House, small, in fair condition. Outbuildings, basement barn, 32x58. Watered, house, by well; barn, by springs; fields, by spring and creek. Occupied by owner. Reason for selling, other business. Price, $2,000. Terms, $900 cash and remainder on mortgage. Address Robert H. Brown, North Pharsalia, N. Y.

TOWN OF PLYMOUTH

Population 959

No. 134.— Farm of 82 acres; located ½ mile from Plymouth; 8½ miles from

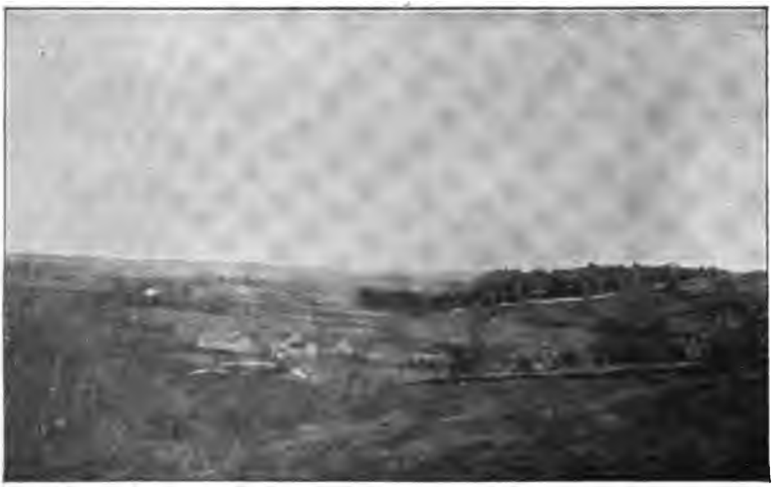


FIG. 10.— VIEW ON FARM NO. 130, TOWN OF NORWICH, CHENANGO, COUNTY.

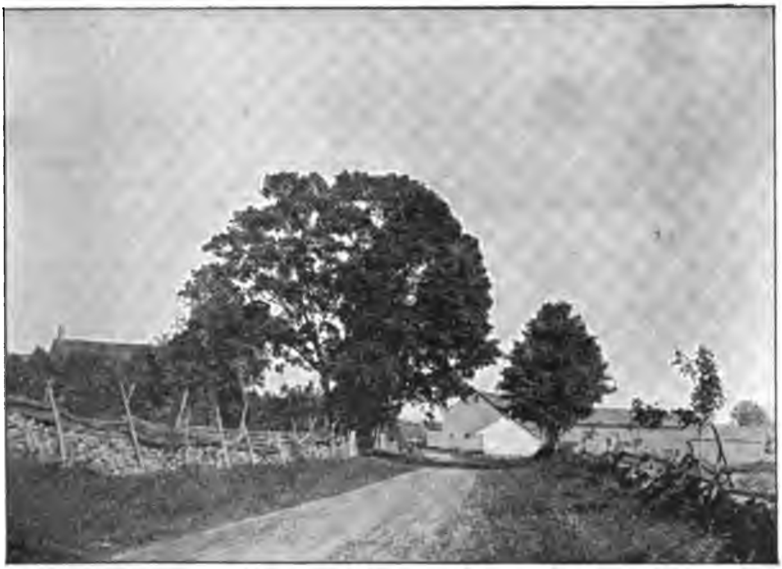


FIG. 11.— VIEW ON FARM NO. 138, TOWN OF ANCRAM, COLUMBIA COUNTY.

UNIV. OF MICH.

Norwich on line of D. L & W. R. R. ½ mile from school, churches, butter factory and cheese factory; 8½ miles from milk station and condensing plant. Highways, state road. Nearest city, Norwich, population 8,342, 8½ miles distant, reached by highway. General surface, rolling. Nature of soil, loam. Acres that can be used as meadow, 60; in natural pasture, 38; in timber, 5, maple. Acres tillable, 60. Fruit, 20 apple and 4 cherry trees. Best adapted to hay, potatoes and oats. Fences, wire, in fair condition. House, 12 rooms. Outbuildings: basement barn 36x60, wagon barn, granary, poultry houses, hog house and 2 milk houses. Watered, house and barns, by running water; fields, by creek. Occupied by owner. Reason for selling, poor health. Price, $3,500. Terms, ½ cash and remainder on mortgage. Address Orville S. Benedict, Plymouth, N. Y.

No. 135.— Farm of 103 acres; located 1¼ miles from South Plymouth; 2 miles from Galena, on line of O. & W. and D., L. & W. R. Rs.; 1¼ miles from school; 2 miles from churches and milk station; 2½ miles from butter factory and cheese factory and 5 miles from condensing plant. Highways, dirt and state road. Nearest city, Norwich, population 8,342, 5 miles distant, reached by highway. General surface, hilly and rolling. Nature of soil, loam. Acres in meadow, 43; in natural pasture, 30; in timber, 30, maple and hemlock. Acres tillable, 43. Fruit, 50 apple and 2 pear trees. Best adapted to hay, oats and corn. Fences, wire, in fair condition. House, 9 rooms. Outbuildings: basement barn, shed, granary, poultry house and milk house. Watered, house by well and fields by creek. Occupied by tenant. Reason for selling, has another farm. Price, $2,800. Terms, ½ cash and remainder on mortgage. Address P. R. Harris, Plymouth, N. Y.

No. 136.— Farm of 213 acres; located 1 mile from Plymouth P. O.; 5 miles from railway station at Smyrna, on line of N. Y., O. & W. R. R.; 9 miles from railway station at Norwich, on line of N. Y., O. & W. and D., L. & W. R. Rs.; ½ mile from school; 1 mile from churches, butter factory and cheese factory; 9 miles from milk station and condensing plant. Highways, good. General surface of farm, rolling. Altitude, 1,300 feet. Nature of soil, loam and some gravel. Acres that can be used as meadow, 75; in natural pasture, 123; in timber, 15, maple and beech. Acres tillable, 70. Fruit, 30 apple trees. Best adapted to hay, corn, potatoes and oats. Fences, wire, good condition. House, double, nearly new, 20 rooms. Outbuildings, 2 good basement barns, good granary, hog pen, corn house, 1 barn, granary and milk house covered with slate roofs. House and barns have running water; fields watered by creek. Occupied by owner. Reason for selling, other business. Price, $14,000. Terms, half cash, balance on mortgage. A first class dairy farm, concrete floors in barns, buildings protected from lightning. Address E. H. Powell, owner, Plymouth, N. Y. Star Route.

CLINTON COUNTY

Area, 1,092 square miles. Population, 47,561. Annual precipitation, 42.47 inches. Annual mean temperature, 46.8°. Number of farms, 3,608. County seat, Plattsburg.

This county lies in the northeast corner of the state, bounded on the east by Lake Champlain.

The surface is generally hilly and broken, and in the southern and western parts, mountainous. The county is rich in deposits of magnetic iron ore of the best quality. A part of the central and western portions of the county is covered by the original forests. Along the lake shore, the surface is level or moderately uneven. Drift deposits in the northern and eastern parts are abundant, also peat bogs.

The soil is a clay and sandy loam and many fine farms are found in this county. The chief rivers of the county are Ausable, Little Sable, Salmon, Saranac, Little Chazy, Great Chazy and the English. Upon all of these rivers and streams are numerous falls furnishing an immense amount of water power. In the western wilderness portion are many famous lakes, the principal of which are the Chateaugay, Chazy, Sampson and Taylor. This section is a great resort for hunters, game and fish being found in abundance. Plattsburg, the county seat, has a population of 10,134, and furnishes a good local market. The United States military post is located at Plattsburg and the Dannemora State Prison is located in the county. There is a large business carried on in lumbering, mining, iron making and for the area covered a remarkable showing in agriculture. There are great possibilities for apple growing in this county along the east lake shore. The principal agricultural products are as follows: corn, shelled, 117,378 bushels; oats, 768,640 bushels; barley, 44,520 bushels; buckwheat, 50,385 bushels; potatoes, 818,532 bushels; hay and forage, 91,497 tons. The value of all farm property is $18,116,645, showing a remarkable increase of 50.3 per cent. in a decade. The average value of unimproved land is $3.40 per acre. Number of dairy cows reported, 24,509; horses, 11,369; swine, 10,672; sheep, 8,145; poultry, 141,859. The total milk production was 10,188,024 gallons. The receipts from sale of dairy products was $779,834. The average price of improved farm land, including buildings, was $31.37 per acre. There are 185 district schools, several excellent high schools and a State Normal School located at Plattsburg. Churches of all denominations are located in the villages and country districts. There are thirteen agricultural organizations, namely: one county fair association, eleven granges, one Pomona grange. Sixty-four miles of state and county roads and 947 miles of other improved highways traverse the county. The D. & H. railroad crosses the eastern part of the county and branches extend through other portions, giving, together with the lake waterway, unusual facilities for transporting the products of farm, mine and factory in the county.

TOWN OF AUSABLE

Population 1,968

No. 137.— Farm of 135 acres; 1 mile from Arnold Station, on line of D. & H. R. R.; 2 miles from Clintonville P. O.; 1 mile from school; 2 miles from churches; 3 miles from butter and cheese factory. Loamy soil, adapted to general farming. Fine scenery. Good trout fishing. Nature of soil, sandy loam. Acres that can be used as meadow, 40; in natural pasture, 50; in timber, 45. Acres tillable, 40. Watered by springs. Fences, American wire, in good condition. Good orchard. 2 story frame house of 10 rooms, in fine repair, water in bath room and house. Large barn, stable and outbuildings, all in good condition. This would make a good poultry farm. Near a good market. Reason for selling, advanced age of owner. Price, $3,000, cash or easy terms. Address John Pattinson, owner, Clintonville, N. Y.

COLUMBIA COUNTY

Area, 688 square miles. Population, 44,111. Annual precipitation, 46 inches. Annual mean temperature, 50°. Number of farms, 2,963. County seat, Hudson. Average price of farm land per acre, $42.60. This is an increase of 31.6 per cent. in ten years.

The county lies on the east shore of the Hudson and extends east to the line of Massachusetts. The Taghkanick Mountains extend along the east border, and the adjoining parts of the county are broken by irregular ranges of hills which constitute the outlying spurs of these mountains. The western portion of the county spreads out in an undulating plateau terminating in the bluffs of the Hudson river. The principal streams are the Jansenkill, Claverack and Kinderhook creeks. These streams and their tributaries furnish valuable water power and prosperous mills are located on them. In the northern portion of the county are numerous lakes and ponds all well stocked with fish. Thermal and mineral springs are found in places, the former, quite celebrated, located at New Lebanon. The various branches of agriculture form the leading industrial pursuits of the people. At the same time there are manufactured to a large extent, paper, cotton fabrics, vegetable extracts and iron. The county is most favorably situated for commerce, as the largest ships can dock at Hudson. The principal crops are: corn, shelled, 190,368 bushels; oats, 458,785 bushels; buckwheat, 61,420 bushels; rye, 238,445 bushels; potatoes, 153,773 bushels; hay and forage, 65,567 tons. Columbia county ranks first in the production of rye and the demand for rye straw in New York city, together with the cheapness of transportation makes this product almost as valuable as the grain itself. The live stock of the county is classified as follows: dairy cows, 13,898;

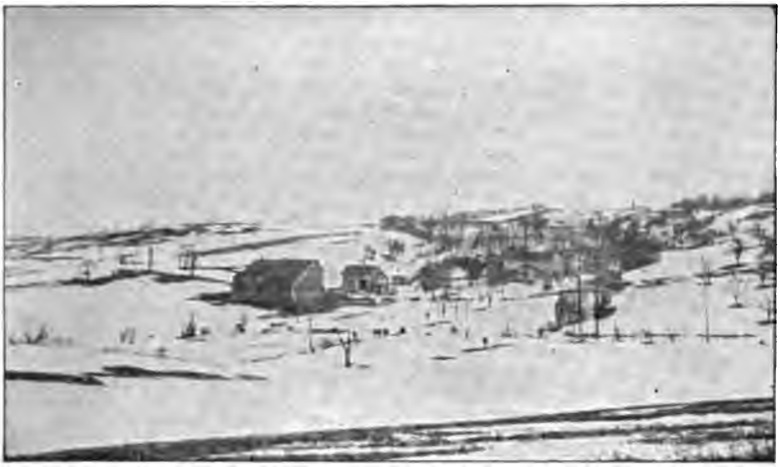


FIG. 12.—VIEW ON FARM NO. 139, TOWN OF AUSTERLITZ, COLUMBIA COUNTY.

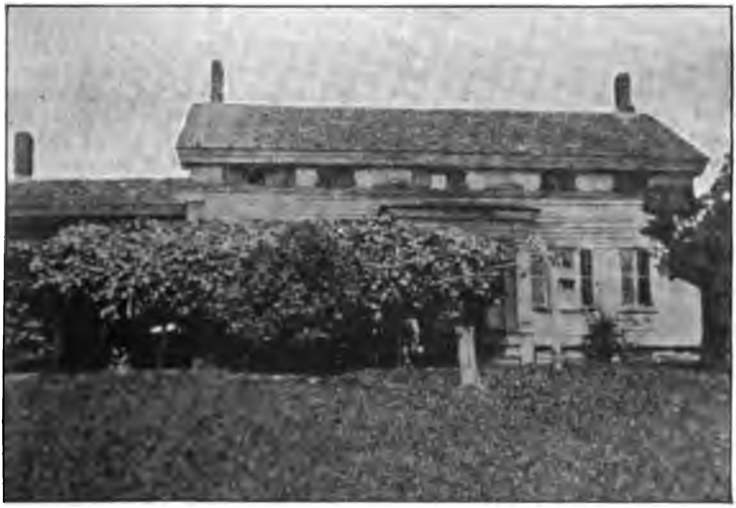


FIG. 13.— HOUSE ON FARM NO. 139, TOWN OF AUSTERLITZ, COLUMBIA COUNTY.

horses, 8,570; swine, 10,231; sheep, 10,486; poultry, 209,101; production of milk, 7,772,732 gallons. Receipts from sale of dairy products was $714,274. This county is a choice location for the raising of apples and other orchard fruits.

The soil survey recently made by the United States Government affirms that the county has a soil and climate equal to any portion of the state for orcharding. Steam and electric lines, together with good roads, make ample facilities for shipping products. There are 150 district schools; churches of all denominations are established in the villages and through the rural sections. There are twenty agricultural organizations established in the county. The total valuation of farm property is $19,819,369, an increase of 31.6 per cent. in ten years. The prosperity of the farmers in this county is noted by an increase of nearly $2,500,000 in the value of farm buildings alone.

TOWN OF ANCRAM

Population 1,110

No. 138 — Farm of 217 acres; located 2 miles from Ancram Village, P. O., R. D. 1, and railway station, on line of Central New England R. R.; ⅛ mile from school; 2 miles from Protestant churches and milk station. Highways, good. Nearest city, Hudson, population 11,544, 18 miles distant. Surface of farm, rolling and level. Soil, limestone and loam. Acres in meadow, 20; in timber, 19, oak, chestnut and hickory. Acres tillable, 178. Fruit, 500 apple trees, also pears, plums, quinces, cherries and grapes for home use. Best adapted to rye, corn, oats and hay. Fences, stone wall and rail, good condition. House, 18 rooms, 2 fireplaces, good condition. Outbuildings: newly painted grain barn, 40x36; hay barn, 24x100; hay barn, 18x36; carriage house and garage, 20x36, all in good condition. Watered, house, by well and cistern; barns, by running water; fields, by streams. Occupied by owner. Reason for selling, poor health of owner. Price, $14,000. Terms, $7,000 down, balance on mortgage. There is a good tenant house on farm. Address Mrs. A. B. Downing, owner, Ancram, N. Y.

TOWN OF AUSTERLITZ

Population 889

No. 139.— Farm of 170 acres; located 4½ miles from railway station at Ghent, on line of B. & A. and N. Y. C. R. Rs. Highways, somewhat hilly, but good. This farm is 1¼ miles from school; 2½ miles from Protestant churches, butter factory and cheese factory; 5 miles from milk shipping station. Nearest large village, Chatham, population 2,389, 6 miles distant, reached by rail and highway. Acres in natural pasture, 50; in meadow, 70; in timber, 20, chestnut, oak, maple, etc. Acres tillable, 130. Occupied by present owner 47 years. Fruit, 100 apple, 15 pear, 15 cherry, 65 plum trees and 10 grape vines. Fences, mostly wire; some stone and rail. Large 14 room house, main part 25x40, wing 18x25. Outbuildings, main barn, 45x60, stanchions for 18 cows, stalls for 6 horses; wagon house, 26x32; poultry house, 15x20; hog pen and corn house, 12x24; wood house, 15x20; shop, 10x12; new tool house, 14x35; all in good condition. Daily mail at door. Watered by two wells and several springs. Adapted to dairying, poultry, fruit raising or general farming. Soil, clay subsoil, no gravel or swampy land. Altitude, 900 feet. Reason for selling, unable to care for farm. Price, $5,000. Terms, ½ cash, balance on mortgage at 5 per cent. Address John Freehan, owner, Ghent, N. Y.

No. 140.— Farm of 20 acres; located 3½ miles from Chatham P. O. and railway station; 1 mile from school and churches. State road within ¼ mile of farm. Nearest city, Albany, population, 107,979, 24 miles distant. Surface of farm, rolling. Altitude, 800 feet. Soil, clay loam. All tillable. Fruit, 1,200 apple trees. Best adapted to fruit. House, 24x30, 6 rooms, fair condition. Watered by well. Occupied by owner. Reason for selling, owner in other business. Price, $4,500. Terms, 60% cash. Address T. F. Niles, owner, Chatham, N. Y. Will rent, with option to buy.

TOWN OF CANAAN

Population 1,057

No. 141.— Farm of 130 acres; located 2 miles from Canaan on line of B. & A. R. R.; ¼ mile from school; ⅛ mile from church; 2½ miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 9 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 50; in natural pasture, 35; in timber, 25, chestnut and common wood. Acres tillable, 90.

Fruit, some apple trees. Best adapted to rye and other grains. Fences, good. House, new, 15 rooms. Outbuildings, barn 50x40. Watered, house, by spring; barns and fields, by creek. Occupied by owner. Reason for selling, old age. Price, $2,800. Terms, ½ cash and remainder on mortgage. Address Ciro E. Cadalso, Canaan, N. Y.

No. 142.— Farm of 305 acres; located 5 miles from East Chatham, 1¼ miles from Edwards Park on line of B. & A. R. R.; 1¼ miles from school; 2 miles from churches and 5 miles from cheese factory. Highways, good. Nearest village, Chatham, population 2,389, 9 miles distant, reached by rail and highway. General surface, level and rolling. Nature of soil, loam. Acres in meadow, 75; in natural pasture, 80; in timber, 150, pine, chestnut, oak and maple. Acres tillable, 100. Fruit, varieties of apple, pear and plum trees. Best adapted to corn, rye, oats and potatoes. Fences, wood and wire, in good condition. House, 11 rooms, in good condition. Outbuildings, hay barn, dairy barn, horse barn, hog house, poultry house, ice house, creamery and wood house. Watered, house, by spring; barns, by spring; fields, by spring and brook. Occupied by tenant. Reason for selling, to close an estate. Price, $6,500. Terms, 60 per cent. cash and remainder on mortgage. Address Rev. J. Perry Beaver, Coeymans, N. Y.

No. 143.— Farm of 95 acres; located 1 mile from East Chatham P. O., R. D. No. 1, and railway station on line of B. & A. R. R.; 1 mile from school, churches and cheese factory and 4 miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 6 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, 600 feet. Nature of soil, good. Acres that can be used as meadow, 80; in natural pasture, 5; in timber, 10, oak, hickory, hemlock, pine, good quality. Acres tillable, 80. Fruit, 65 apple, 4 cherry, 3 peach and 6 pear trees. Adapted to hay, corn, oats, buckwheat, rye and potatoes. Fences, mostly woven wire, good condition. House, 14 rooms, good condition. Outbuildings, basement barn 72x35, poultry house 24x12, wood house 16x20, garage 12x20, all in good condition. Watered, house by well and spring, barns by well and brook, and fields by brooks. Occupied by owner. Reason for selling, wishes to retire. Price, $7,500. Terms, $5,000 cash, balance on mortgage. Will sell stock and tools with farm if desired. Address Edgar H. Coburn, owner, East Chatham, N. Y., R. D. No. 1.

TOWN OF CHATHAM

Population 3,301

No. 144.— Farm of 66 acres; located ¼ mile from Malden Bridge; 4 miles from Chatham Center, on line of B. & A. R. R.; ⅛ mile from school; ½ mile from churches, and 2 miles from milk station. Highways, good dirt road. Nearest village, Chatham, population 2,389, 8 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, limestone and gravelly. Acres used as meadow, 66. Acres tillable, 66. Fruit, 28 plum, 15 pear, 4 peach, 20 cherry and 24 apple trees. Adapted to hay, oats, rye, corn and potatoes. Fences, wire and rail, in good condition. House, 11 rooms, in good condition. Outbuildings: basement barn 30x50, wagon house 18x20, corn house and hog house. Watered, house, by well and cistern; barn, by running water; and fields by creek and spring. Occupied by owner. Reason for selling, wishes to retire. Price, $3,800. Terms, cash. Address Mrs. Verna B. Drowne, Malden Bridge, N. Y.

No. 145.— Farm of 100 acres; located 1½ miles from East Chatham P. O., R. D., and railway station, on line of B. & A. R. R.; ¼ mile from school; ½ mile from churches; 1½ miles from cheese factory and 4 miles from milk station. Highways, good; ½ mile from proposed state road. Nearest village, Chatham, population 2,389, 4 miles distant. General surface, level to rolling. Altitude, 550 feet. Acres that can be used as meadow, 70; in natural pasture, 5; in timber, 25, mostly heavy pine, chestnut and oak. Acres tillable, 70. Fruit, an abundance of apples, pears, plums, peaches, cherries, currants and strawberries. Adapted to hay, rye, oats, corn, potatoes and garden truck. Fences, rail, board and woven wire, in good condition. House, 20 rooms arranged for 2 families, in first class condition. Outbuildings: barn 30x44, 18-foot posts; shed 20x52, 12-foot posts; wagon house 20x30, 12-foot posts; corn crib and shop 20x30, 12-foot posts; hog house and 2 poultry

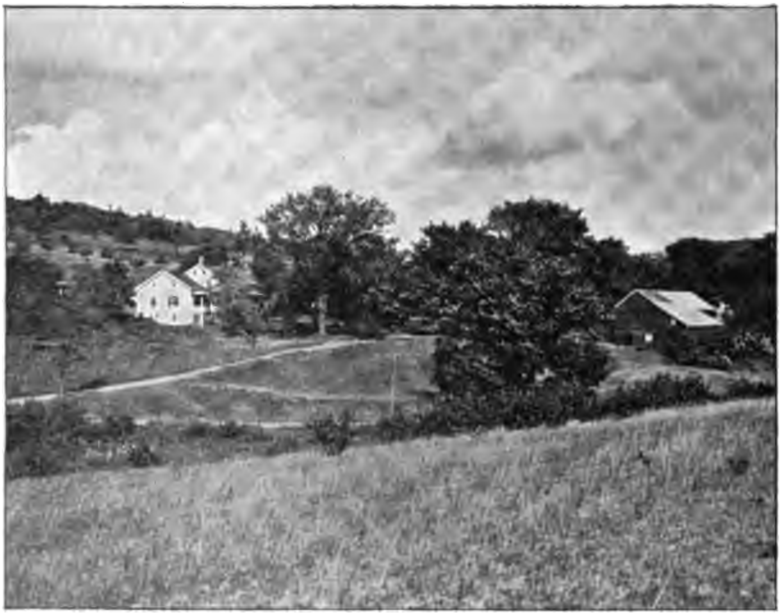


FIG. 14.— VIEW ON FARM NO. 143, TOWN OF CANAAN, COLUMBIA COUNTY.

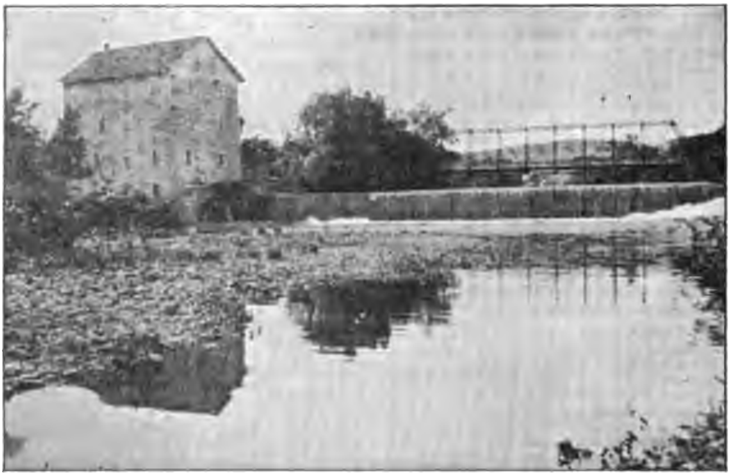


FIG. 15.— MILL AND DAM ON FARM NO. 148, TOWN OF CHATHAM, COLUMBIA COUNTY.

houses. House watered by never-failing well, barns by well, fields by spring and stream. Occupied by owner. Reason for selling, wish to retire. Price, $9,000. Address E. J. Colbert, owner, East Chatham, N. Y.

No. 146.— Farm of 114 acres; located 4 miles from Chatham P. O., R. D. No. 1, and railway station and 2½ miles from East Chatham, on line of B. & A. R. R.; 1 mile from school; 1¼ miles from churches; 2½ miles from cheese factory and 4 miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 4 miles distant. General surface, rolling. Altitude, 600 feet. Acres that can be used as meadow, 99; in natural pasture, 76; in timber, 14, oak, maple, chestnut, hickory and pine. Acres tillable, 99. Fruit, 45 apple trees. Adapted to hay, rye, oats, corn and buckwheat. Fences, board, rail and woven wire, in good condition. No house. Outbuildings: Barn 30x45, 18-foot posts; 7-foot basement, wagon house and shed 20x30, 12-foot posts; 7-foot basement in good condition. Barns and fields watered by springs. Occupied by owner since 1877. Reason for selling, wish to retire. Price, $3,600. Address E. J. Colbert, owner, East Chatham, N. Y.

No. 147.— Farm of 56 acres; located ½ mile from East Chatham railroad station, on line of B. & A. and Harlem Division of the N. Y. C. R. Rs.; ½ mile from school, churches, cheese factory and milk station. Highways, excellent. General surface of farm, rolling. Nature of soil, sandy loam. Acres in timber, 7, oak, birch and maple. Fruit, about 1,000 pear and 20 apple trees. All but the woodland in fruit. Adapted to rye, oats, onions and potatoes. Fences, wire. House, 16 rooms, 2 cellars, running water, gas, modern improvements. Barns, nearly new. Watered, house and barns by spring, fields by springs and streams. Occupied by owner. Reason for selling, old age. Price, $6,000; ½ cash, balance on mortgage. Address Dr. J. J. Ashley, owner, East Chatham, N. Y. Will rent.

No. 148.— Farm of 44 acres; located 1½ miles from Chatham Center P. O.; 2 miles from railway station, on line of B. & A. R. R.; 1½ miles from school and church, and 3 miles from milk station. Highways, good state road. Nearest village, Chatham, population 2,389, 5½ miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravel loam. Acres that can be used as meadow 37, in natural pasture, 7. Acres tillable, 37. Fruit: 50 apple trees, cherries, plums and small fruits. Best adapted to hay, potatoes and grain. Fences, wire, good condition. House, 8 rooms, frame, in good condition. Outbuildings: large barn and shed, icehouse, poultry house, and smoke house. Kinderhook Creek runs through farm. Occupied by owner. Reason for selling, other business. Price, $8,000. Terms, $4,000 cash, balance on mortgage. Water power flour and feed mill with farm. Address Mrs. Helen C. Van Alstyne, owner, Chatham Center, N. Y. Will rent.

No. 149 — Farm of 290 acres; located 1½ miles from Old Chatham, on line of Rutland R. R.; ½ mile from school; 1½ and 2 miles from churches; 1½ miles from milk station; 3½ miles from cheese factory. Good highways. Nearest village, Chatham, population, 2,389, reached by rail and highway. General surface of farm, half level and balance mostly rolling. Nature of soil, glacial drift on slopes, alluvium on level. Acres that can be used as meadow, 200; now used as meadow, 140; in natural pasture, 35; in timber, 25, chestnut, hemlock and maple. Acres tillable, 240. Fruit, 25 acres of apples. Adapted to oats, corn, rye, wheat, hay, beans and potatoes. Rail, stone, and woven wire fences in fair condition. Four houses in excellent condition, as follows: 2-story, 40x40; 2-story, 20x24, with well, 18x20; two 1-story houses, 30x36. Outbuildings: horse stable, cow stable, silo, 2 large hay and grain barns, ample for farm. House watered by wells and cistern; barns by running water; fields by brooks and springs; running water in one house. Farm now occupied by owner. Price, $25,000. Terms, 60% cash, remainder on mortgage, easy terms. Address Hugh Van Alystyne, R. D. 29B, Old Chatham, N. Y.

No. 150.— Farm of 136 acres; located 1¼ miles from East Chatham, on line of B. & A. R. R.; 1¼ miles from school, churches, and cheese factory; 5 miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 4 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam. Acres in meadow, 110; in natural pasture, 12; in timber, 5, oak and pine. Acres tillable, 110. Fruit, 160 apple and 50 plum trees. A few pear, cherry and quince trees and grape vines. Adapted to hay, corn, oats, buckwheat and potatoes. Fences, wire, in good condition. House, large and nearly new. Outbuildings: large barn, wagon house, hog house, poultry house and shed. Watered, house and barns, by well; fields, by springs and creek. Occupied by owner. Reason for selling, other business. Price, $8,000. Terms, ½ cash and remainder on mortgage. Address Eugenie M. Doyle, Chatham, N. Y.

TOWN OF CLAVERACK

Population 4,403

No. 151.— Farm of 145 acres; located ½ mile from Martindale postoffice; ½ mile from railway station at Martindale, on line of N. Y. C. R. R. (Harlem Division); 1 mile from school and church; 5 miles from milk station. Good highway. Nearest village, Philmont, population, 2,060, distant 2 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 350 feet. Nature of soil, gravelly. Acres that can be used as meadow, 30; in timber, 20; number tillable, 100. Apple orchard. Best adapted to corn, oats and rye. Wire and rail fences in fair condition. Fine house of 13 rooms. Basement barn, 50x30; cow barn, 20x40; wagon house, 30x20; hog pen, 18x12, and 5 poultry houses. Running water in house and barn, 50 lbs. pressure; fields watered by brooks. Forest lake 2½ miles distant. Farm now occupied by owner. Price, $5,300. Address Pitcher and Stempel, Martindale, N. Y.

No. 152.— Farm of 200 acres; located 1½ miles from postoffice at Philmont, R. D. No. 2; 2 miles from railway station at Martindale, on line of Harlem Div., N. Y. C. R. R.; 1½ miles from school and churches; 6 miles from cheese factory; 3 miles from milk station. Good highways. Nearest village, Philmont, population, 2,060, distant 1½ miles, reached by rail and highway. General surface of farm, rolling and level. Altitude, 400 feet. Very fertile soil. Acres used as meadow, 50; in timber, 25. Not much fruit; apple trees are old. Best adapted to hay and grain. Good stone and wooden fences. Nine-room house in fair condition. One large combination barn, condition good. House and barns watered by pumps; fields by stream. Forest lake 4 miles distant. Occupied by owner. Reason for selling, death of parents. Price, $6,000. Terms, mostly cash, but will take small mortgage. Address Miss M. Johns, Martindale, N. Y.

No. 153.— Farm of 140 acres; located 3 miles from Claverack postoffice, R. D. No. 2; 3 miles from railway station at Claverack, on line of B. & A. R. R.; 100 yards from school; 2 miles from churches. Good highways. Nearest city, Hudson, population, 11,544, distant 5 miles, reached by highway; also rail from Claverack. General surface of farm, rolling and level. Altitude, 300 feet. Good soil. Six acres in timber. Ten acres now in 3-year peaches and apples. Best adapted to grain. Stone fences in fair condition. Two-story frame house of 11 rooms. One hay barn; 2 cattle barns; hog pens. House and barns watered by pumps; fields by stream. Hudson river about 5 miles distant. Farm now occupied by owner. Reason for selling, owner desires change of location. Price, $10,000. Address William Jones, Claverack, N. Y., R. F. D.

TOWN OF CLERMONT

Population 881

No. 154.— Farm of 210 acres; located 1 mile from Clermont P. O.; 6 miles from railway station at Germantown, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 5 miles from butter factory, and 4 miles from milk station. Highways, good. Nearest city, Hudson, population 11,544, 14 miles distant, reached by auto bus. Surface of farm, level. Altitude, 125 feet. Soil, gravelly loam. Acres in meadow, 100; in natural pasture, 10; in timber, 10, oak, locust and chestnut. Acres tillable, 190. Fruit, 250 bearing Baldwins, 300 trees 5 years old of standard varieties, and 10 pear trees. Best adapted to fruit, hay, dairying and grain. Fences, mostly wire, good condition. House, 24½x47½, 3 stories, brick, 14 rooms, 5 open fireplaces, piazza 10x28½, colonial, with 2-story frame wing 30½x38½, in good condition. Outbuildings: barns, 29x55, 34x54, 51½x40½, wagon house and stable combined 30x50, shed 16x4, corn house, ice house and hog house. Watered, house,

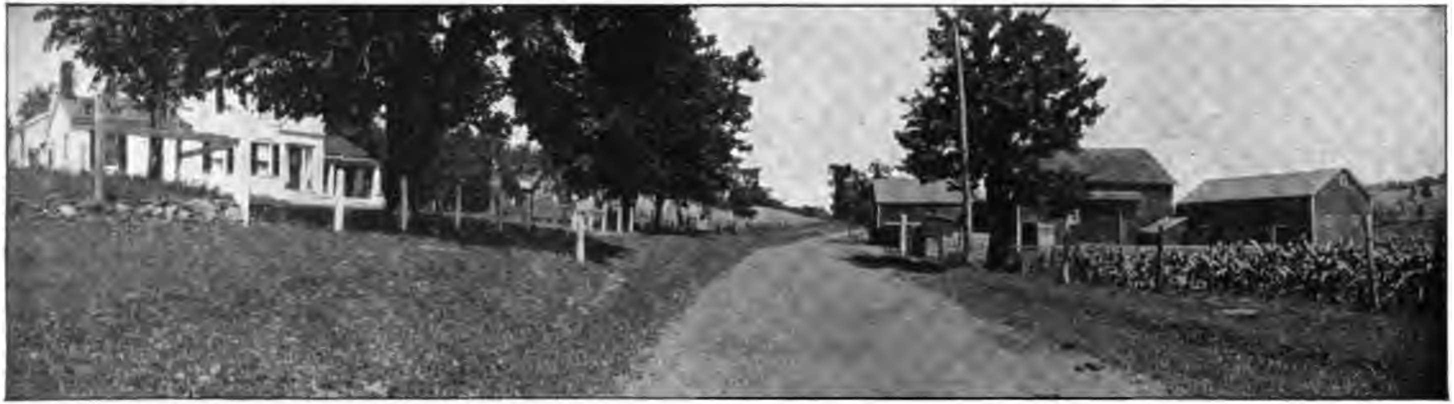


FIG. 16.— VIEW ON FARM NO. 145, TOWN OF CHATHAM, COLUMBIA COUNTY.

by well, barns by well and creeks, fields by creeks. Hudson River, 5 miles distant from farm. Occupied by owner. Reason for selling, old age. Price, $11,000. Terms, ½ cash, balance on mortgage. Also good tenant house, with barn, on farm. Rates of shipment of farm produce to New York City are low. Address Harold Wilson, owner, Clermont, N. Y.

TOWN OF COPAKE

Population 1,368

No. 155 — Farm of 200 acres; located 2½ miles from Hillsdale P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R. (Harlem Division); 2½ miles from school, churches, butter and cheese factory and milk station. Highways, good. General surface, rolling. Altitude, 1,200 feet. Acres in meadow, 40; in pasture, 60; in timber, 100, all varieties. Acres tillable, 55. Fruit for home use. Best adapted to corn, potatoes and rye. House, 35x25, in good condition. Barn, 30x40, with wing, good condition. House watered by well, barn and fields by springs and stream. Occupied by tenant. Price, $2,000. Terms, easy. Address, W. A. Mallery, owner, Hillsdale, N. Y. Will rent.

TOWN OF GHENT

Population 3,118

No. 156.—Farm of 200 acres; located 1 mile from Stockport P. O. and railway station, on line of A. S. R. R.; 1 mile from school and church; 3½ miles from butter factory, cheese factory and milk station. Highways, somewhat hilly. Nearest city, Hudson, population 11,544, 7 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, clay loam. Acres in meadow, 100; in natural pasture, 6; in timber, 12, pine and oak. Acres tillable, 150. Fruit, 75 apple and 25 pear trees. Best adapted to hay, corn and oats. Fences, mostly woven wire, fair condition. House, 25x40, stone, fair condition; tenant house in good condition. Outbuildings: new barn, 40x52; new hog pen and cow shed; also wood house, wagon house and corn house, in good condition. Watered, by spring and cistern; fields by creek and springs. Occupied by tenant. Reason for selling, old age. Price, $8,000. Terms, $3,000 cash, balance on mortgage. Address Mrs. Alvin Moore, owner, Ghent, N. Y. Will rent.

No. 157.— Farm of 270 acres; located 2 miles from Philmont P. O., R. D. 2, and railway station, on line of Harlem R. R.; 1 mile from school; 2 miles from churches and cheese factory; 3 miles from milk station. Highways, state road. Nearest city, Hudson, population 11,544, 11 miles distant. Surface of farm, some level and some rolling. Soil, 100 acres loam, balance of tillable slate land. Acres that can be used as meadow, 120; in natural pasture, 25; in timber, 100, oak and maple. Acres tillable, 150. Fruit: pears, cherries and apples. Adapted to general farming. Fences, stone, rail and wire, fair condition. House, 40x42, with 8 rooms, good condition. Outbuildings: barn, 32x53 wagon house, 24x22; basement barn and wagon house, nearly new; milk, poultry and hog houses. Watered by running water. Occupied by tenant. Reason for selling, too large a farm. Price, $5,250. Terms, $1,500 cash, balance on mortgage. Address Robert Haag, owner, Philmont, N. Y.

No. 158.— Farm of 150 acres; located 2 miles from Chatham P. O. and railway station, on line of B. & A. R. R.; 2 miles from schools, 2 miles from churches and milk station. Highways, good and level. Nearest village, Chatham, population 2,389, 2 miles distant, reached by highway. General surface of farm, 100 acres level, balance rolling. Nature of soil, gravelly and sandy. Acres that can be used as meadow, 30; in natural pasture 20; in timber, 20, oak, pine, maple, etc., Acres tillable, 130. Fruit, 25 apple and 10 pear trees. Best adapted to rye, oats and corn. Fences, wire, in good condition. House, 1½ stories, 12 rooms, in good condition. Outbuildings: 1 good, large barn, large shed, wagon house, corn house and sheep house. House watered by well; barns, by cistern; and fields, by brooks. Occupied by owners. Reason for selling, advanced age of owners. Price, $5,500. Terms, half cash, balance on mortgage. Address Susan and Julia Shufelt, owners, Chatham, N. Y.

No. 159.— Farm of 216 acres; located 2 miles from Ghent and Chatham, on line of N. Y. C., B. & A., H. & C. and Rutland R. Rs.; 2 miles from school; 2 miles from churches; 3 miles from milk station. Nearest large village, Chatham, population 2,389; also 12 miles from city of Hudson, population, 11,544. Highways, good. Surface, some level, some rolling and some hilly. Soil, rich black and gravelly loam. Acres tillable, 200; balance, mostly wooded, some good oak and pine timber. Fruit, about 300 fruit trees of all kinds. Best adapted to rye, oats, corn, potatoes and hay. Fences, mostly woven wire, some board and stone wall, in good condition. Large colonial house, 20 rooms, 3 halls, 2 cellars, separate apartments for owner and farmer, in excellent condition. Fine, large shade trees. Outbuildings: main barn, side hill, 58x40; carriage house and horse stable, 72x24; cow stable, 60x22; sheep stable, 28x24; poultry and tool house, 23x14; corn house and workshop, 24x22; garage, 20x17; hog house, 20x15; ice house, 15x15; smoke house, 11x9; wood house, 22x14; all in fine condition. Tenant house, 5 rooms and cellar. Watered by running water in barns, 3 wells, 3 streams, and 2 cisterns. Have dam built across one small stream forming a nice ice pond. R. F. D. and telephone. Electric current available. This property is 4 miles from the Hudson River. Well adapted for stock or dairy farm. Reason for selling, owner engaged in other business. Price, $21,600, including $3,000 personal property. Address Elbert Miller, owner, 314 W. 112th street, New York City.

No. 160.— Farm of 212 acres; located 1½ miles from Ghent P. O., R. D. 2; and railway station on line of Harlem R. R. and Hudson branch of B. & A. R. R.; 2 miles from school; 1½ miles from churches; 3 miles from milk station. State road under construction. Nearest village, Chatham, population, 2,389, 4 miles distant, reached by rail and good highway. Surface, part hilly and part level. Soil, gravelly loam and slate; 90 acres that can be used as meadow; 50 acres of natural pasture; 15 acres of timber, mostly second growth, including 5 acres of pine. Acres tillable, 150. About 100 bearing apple trees and several plum, peach and pear trees. Fences, mostly woven wire, some stone wall. There are two complete sets of buildings, near enough for convenience. The two houses are 1½ stories; one has 12, the other 7 rooms; in fair condition. One 2-story barn and plenty of other barns and buildings for convenience and comfort, all in good condition, mostly newly roofed. House has water piped from spring; barns piped from spring; fields have several springs. The Catskill Mountains, about 10 miles distant, are in full view from any part of farm; the Hudson river about same distance. This farm is one of the best watered in this section; water from never-failing spring is piped to the house, barn yard and poultry yard. Telephone in house, and R. D. passes door. The farm is practically divided by the Harlem R. R. One set of buildings each side. It is particularly adapted to stock, especially sheep. Occupied by owner since 1880. Reason for selling, owner's desire to retire. Price, $9,000. Terms, one-half cash, balance mortgage, 5%, term of years. Address Delmer Kisselburgh, owner, Ghent, N. Y.

No. 161.— Farm of 267½ acres. Owner will sell 175, 190, 200, 225 acres, or the whole farm including vein of brown hematite iron ore. Located ¼ mile from railway station at Pulver Station, on line of Hudson & Chatham Branch of B. & A. R. R.; 2 miles from Mellenville and 3 miles from Philmont; ½ mile from school; 2 miles from churches; 6 miles from milk station. Nearest large village, Philmont, population, 2,000. Good highways. Surface, mostly level, some rolling. Soil, rich black and gravelly loam, comparatively free from stones. About 215 acres tillable. Fruit enough for family use. Best adapted to rye, oats, hay, corn and potatoes. Fences, woven wire, board and wall. Extra fine house, 12 large rooms, 2 large halls, colonial style. Outbuildings: large side hill barn, 68x40, gambrel roof; cow barn, 45½x19½; carriage house, 32x13, all connected; just being completed to replace barns burned; hog house and corn house connected, in fair condition. Watered by wells and two never failing streams. This property is about 8 miles from the Hudson river. Products can be shipped at Pulver Station, practically on the farm. Farm now occupied by farmer and hired help. This is a high class farm, and would make ideal stock farm Reason for selling, owner has other business. R. F. D. and telephone lines. Electric current available. Prices and terms in accordance with amount of land required, for which address Elbert Miller, owner, 314 W. 112th Street, New York City.

TOWN OF HILLSDALE

Population 1,313

No. 162.— Farm of 140 acres; 5 miles from Hillsdale P. O. and railway station.

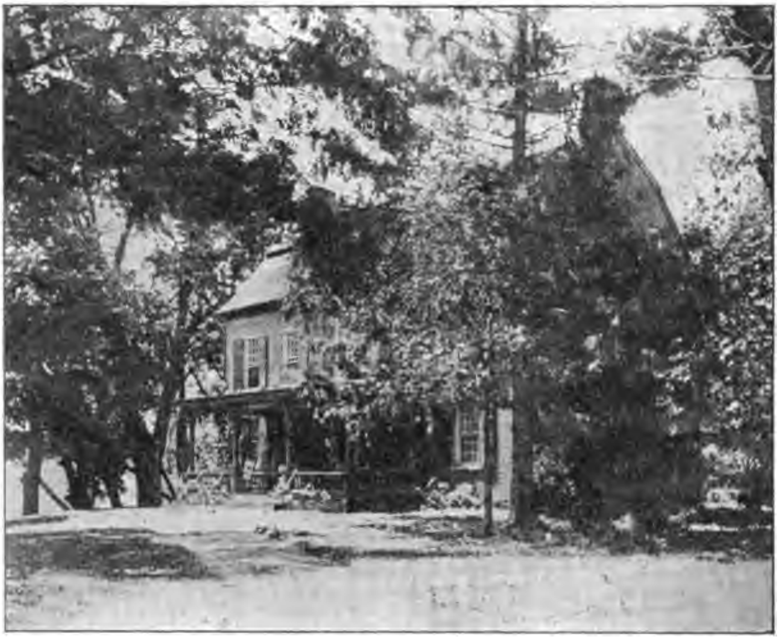


FIG. 17.— HOUSE ON FARM No. 154, TOWN OF CLERMONT, COLUMBIA COUNTY.

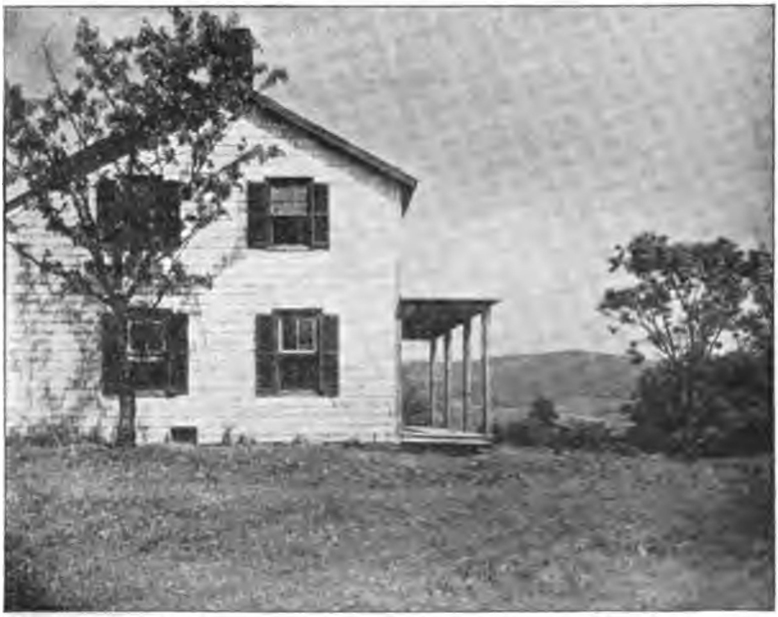


FIG. 18.— HOUSE ON FARM No. 155, TOWN OF COPAKE, COLUMBIA COUNTY.

on Harlem Division of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches; 2½ miles from cheese factory and milk station; R. D. and telephone connections. Highways, good and level. Nearest city, Hudson, population 11,544, 16 miles distant, reached by rail and highway. Occupied by owner. Surface of farm, rolling. Soil, slate loam. Acres in meadow, 30 to 40; timber, 35, oak and chestnut. Acres tillable, 100. Fruit: apples, plums, grapes, pears and peaches, fine varieties. Adapted to hay, potatoes and all kinds of grain. Fences, rail and wall. House, 48x30, in good condition. Outbuildings, all in good condition; 1,000 feet above sea level; the best of air and finest spring water. An ideal summer residence. Price, $3,000. Terms, easy. Address Judson Wiley, owner, Hillsdale, N. Y.

No. 163.— Farm of 173 acres; located 1½ miles from Hillsdale P. O.; 1½ miles from railway station, on line of N. Y. C. R. R.; 1½ miles from school, churches, butter factory and milk station. Highways, good. Nearest large village, Great Barrington, Mass., population 5,000. Surface, rolling. Soil, loam and limestone. Acres tillable, 158; 20 acres of chestnut, pine and oak timber. Fruit, 100 apple trees, pears and plums. Adapted to rye, corn, oats. potatoes and hay. Fences, wall, rail and some wire, in good condition. House, 40x45, in excellent condition. Outbuildings: 2 barns, one 86x40 and other 24x40; large wagon house and sheds; tenant house 24x40. Watered by well, springs and streams. Occupied by tenant. Reason for selling, owner has other business. Price, $10,000. Terms, easy. Address W. A. Mallery, Jr., owner, Hillsdale, N. Y.

TOWN OF KINDERHOOK

Population 3,346

No. 164.— Farm of 125 acres; located 1½ miles from Kinderhook P. O. and railway station, on line of A. S. R. R.; 1½ miles from school and churches; 3 miles from butter factory; 1½ miles from milk station. Highways, good. Nearest city, Hudson, population 11,544, 14 miles distant, reached by rail or highway. Surface, mostly level, some rolling. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 5, hardwood, oak, ash, locust for posts. Acres tillable, 100. Fruit, 400 apple trees in full bearing, cherries, pears and grapes; young orchard of 500 trees, beginning to bear. Adapted to potatoes, corn, oats, and rye. Fences, mostly wire, in good condition. House, 30x40, with wing, 15x15, in good condition; water, bath and telephone; tenant house, 24x30; 2 barns, 30x40; stable and wagon house, 40x20; shed and cow stable, 30x50; corn house, new 75-ton silo, and wagon house, 20x24. Watered, house by well and cistern; barns, by wells; fields, by springs and running stream. Occupied by owner. Reason for selling, wishes to retire. Price and terms on application. Address A. M. Snyder, owner, Valatie, N. Y., R. D.

No. 165.— Farm of 200 acres; situated within the incorporated village of Kinderhook, population 827. Fertile, productive soil. Albany Southern Railway Station about ¾ mile from farm, hourly train service. Churches, high school, grange and stores within easy walking distance. State road. Village has 5 miles of concrete sidewalks and streets are lighted by electricity. Farm contains about ½ bottom land or creek flats, which produce large crops of corn, hay, grain, etc. Wood enough for home use. Good pasture. Kinderhook Creek flows through the farm. Abundance of springs, giving unlimited water supply. Trout pond and springs from which water is supplied by hydraulic ram to house and barns. 350 young apple trees just in bearing; 750 young apple trees planted recently; 500 pear trees in bearing; other fruit for home use. House, 13 rooms, 200 years old; bath and heat, excellent repair. Nine-room cottage for farm help. Ample barns, including 3 silos; stable room for 200 head of cattle, storage room for hay, grain and farm tools. For price and further particulars, address Wm. B. Van Alstyne, owner, Kinderhook, N. Y. Will rent.

No. 166.— Farm of 125 acres; located 3 miles from Niverville, on line of B. & A. R. R.; ¼ mile from school; 2 miles from churches, and 3 miles from milk station. Highways, state road. Nearest city, Albany, population 107,979, 12 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, sandy loam and clay. Acres in timber, 20, pine, hemlock, oak and birch.

Acres tillable, 100. Fruit, 1,200 apple, 100 peach, 350 pear, 60 cherry and a few plum trees. Adapted to wheat, corn, oats and buckwheat. Fences, wire, in fair condition. House, 14 rooms, electric lights and steam heat. Outbuildings: basement barn, poultry houses, granary, ice house and hog house, all practically new. Watered, house and barns by springs. Occupied by owner. Reason for selling, advanced age. Price, $22,000. Terms, easy. Address E. Gregory, Niverville, N. Y.

No. 167 — Farm of 158 acres; located 1½ miles from Valatie; 2 miles from railway station at Niverville, on line of B. & A. R. R.; 1½ miles from school, churches and milk station. Highways, good. Nearest city, Albany, population 107,979, 17 miles distant, reached by rail or highway. General surface, level. Nature of soil, sandy loam. Acres in timber, 8, variety. Acres tillable, 150. Fruit, 300 apple trees and enough small fruit for family use. Adapted to rye, corn, oats, potatoes and fruit. Fences, American wire, in good condition. House, 9 rooms, steam heat and in excellent condition. Outbuildings: 2 large barns, store house, horse barn, corn house and garage. Watered, house, by wells and cistern; barns, by well, and fields by stream. Occupied by owner. Reason for selling, ill health. Price, $15,000. Terms, to suit purchaser. Address C. C. New, Valatie, N. Y.

No. 168.— Farm of 103 acres; located 2½ miles from Niverville; ⅛ mile from railway station at Post Road, on line of B. & A. R. R.; ½ mile from school; 2 miles from churches. Highways, good. Nearest village, Valatie, population 1,410, 3 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, sandy loam. Acres in meadow, nearly all; in timber, 3. Acres tillable, 100. Fruit, about 30 apple trees. Adapted to grain, hay, fruits and vegetables. Fences, board, in fair condition. House, 9 rooms, in good condition. Outbuildings, 1 large and 3 small ones. Watered, house, by well and cistern; barns near creek; fields, by creek. Occupied by tenant. Reason for selling, other business. Price, $3,600. Terms, $1,300 cash and remainder on mortgage at 5 per cent. Address Frank H. Wood, State Education Department, Albany, N. Y.

TOWN OF LIVINGSTON

Population 1,522

No. 169.— Farm of 275 acres; located 4 miles from railway station at Linlithgo, on line of N. Y. C. R. R.; ½ mile from Blue Stores P. O.; ¼ mile from school; 2½ miles from churches; 3½ miles from creamery. Highways, state road. Nearest city, Hudson, population 11,544, 8 miles distant. Surface, level. Nature of soil, loam. Acres in meadow, 200; in natural pasture, 50; all tillable. Fruit, about 400 apple trees. Adapted to hay, grain, potatoes and dairying. Fences, wire, good. House, 2 stories, basement, 10 rooms. Outbuildings, 3 barns, 62x52, 45x38, 46x32, good condition. Watered, house by well; barns and fields, by well and springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, $11,000. Terms, $5,000 cash and $150 a year until paid for. Address W. S. Wattles, owner, Box 124, Hudson, N. Y.

TOWN OF NEW LEBANON

Population 1,369

No. 170.— Farm of 38 acres; located 1 mile from New Lebanon P. O.; ¼ mile from railway station, on line of Rutland R. R.; ½ mile from school; churches nearby; ¼ mile from milk station. Highway, in fine condition. nearest city, Pittsfield, Mass., population 35,000, 8 miles distant, reached by highway. General surface of farm, level. Nature of soil, loam. Acres in pasture, 10; in timber, 5. Tillable, 25. Orchard consists of about 35 apple trees in bearing condition. Adapted to general crops. House, 10 rooms, 1½ stories, in good condition. Outbuildings: barn, wagon house, and other buildings, in fair condition. Watered, house by running water. Reason for selling, to settle estate. Price, $2,500. Address Mrs. John W. O'Neil, owner, New Lebanon, N. Y.

No. 171.— Farm of 100 acres; located 1 mile from New Lebanon P. O. and railway station, on line of Rutland R. R.; ¾ mile from school and churches; 1 mile from butter factory and 6 miles from cheese factory. Highways, state road. Nearest city, Pittsfield, Mass., 11 miles distant, reached by state road. General surface, level. Nature of soil, clay loam. Acres that can be used as meadow, all; in natural pasture, about 10.

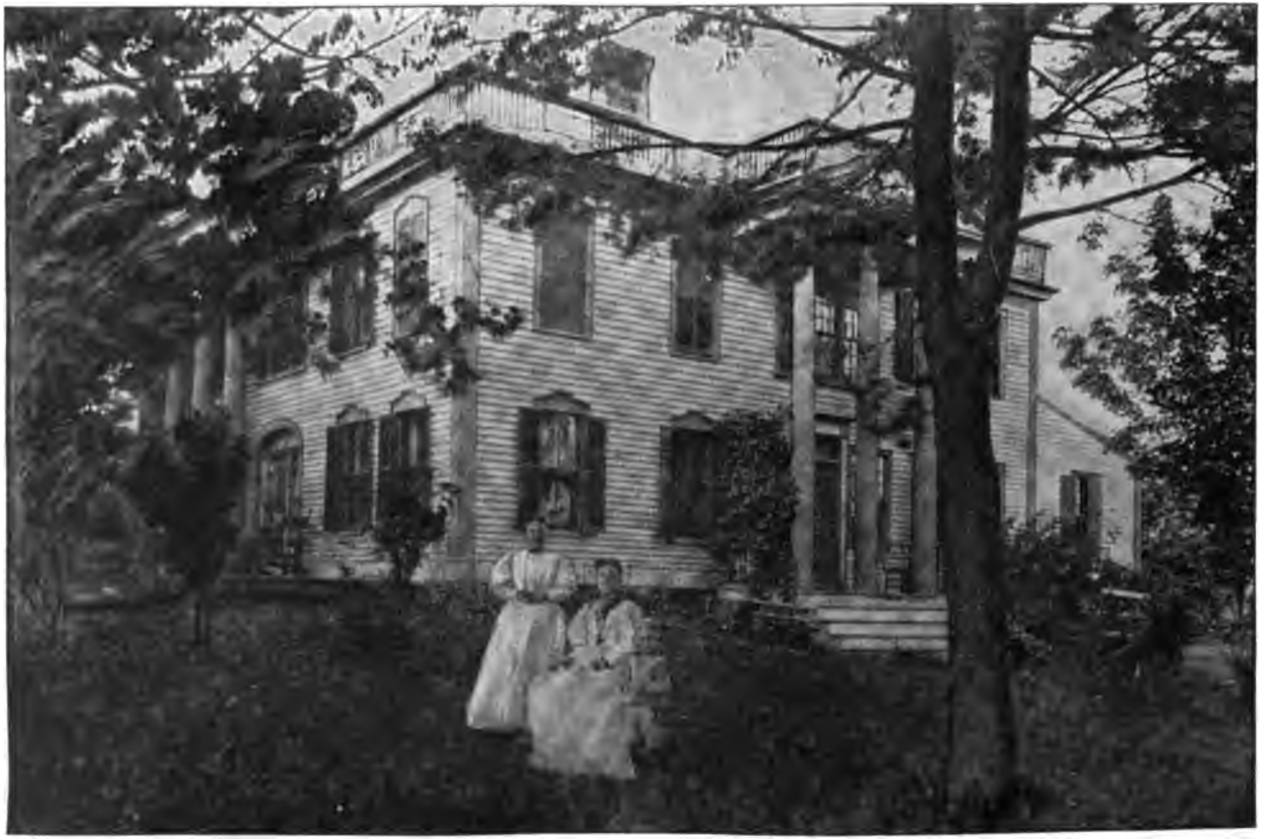


FIG. 19.— HOUSE ON FARM NO. 159, TOWN OF GHENT, COLUMBIA COUNTY.

All tillable. Best adapted to grain and hay. Fences, wire. Two story house, 8 rooms, in fair condition. Outbuildings, shed and 2 hay barracks. House and barns watered by well and fields by creek. Occupied by tenant. Reason for selling, to settle an estate. Price, $6,000. Terms, $2,000 cash, balance on mortgage at 6%. Address Mrs. S. J. Tilden, owner, New Lebanon, N. Y. Will rent.

No. 172.— Farm of 60 acres; located 1 mile from village of West Lebanon, post-office, hotel, church and school; ½ mile from state road running from Albany; 12 miles from Chatham, population 2,389, on line of Rutland R. R.; ½ mile from railway station and on R. D. and telephone line. 30 acres in meadow; in pasture, 15; in timber, 15, pine, chestnut and hemlock. Farm keeps 6 cows and team. Fruit, 50 bearing apple trees, also pears, plums and grapes. House, 2½ stories, 15 rooms. Outbuildings, wood house, wagon house, corn house, hog and poultry house with barn, 20x40, and shed attached, all in good condition. Watered by well and springs. Price, $2,200. Terms, ½ down, balance on bond and mortgage. Address H. J. Gibson, owner, West Lebanon, N. Y.

No. 173 — Farm of 72 acres; located 2½ miles from Lebanon Springs on line of Rutland R. R.; 1½ miles from school; 2½ miles from churches; 2½ miles from milk station. Highways, good. Nearest city, Pittsfield, Mass., population 35,000, 12 miles distant, reached by state road. General surface of farm, sloping. Nature of soil, slate. Acres in meadow, 50; in natural pasture, 12; in timber, 8, hemlock and hard wood. Fruit, 20 apple, 2 pear, 8 plum and 10 cherry trees. Adapted to corn, potatoes, oats, berries and hay. Fences, woven wire and rail, in good condition. House, 8 rooms, in good condition. Outbuildings: barns, 26x66, 28x40 and 24x40, also poultry house, hog house and granary. Watered, house, by well; barns and fields, by springs. Occupied by owner. Reason for selling, other business. Price, $2,000. Terms, ½ cash, remainder on mortgage. Address George W. Hatch, East Nassau, N. Y.

TOWN OF STUYVESANT

Population 1,841

No. 174. Farm of 175 acres; located ¾ mile from Stuyvesant Falls P. O. and ½ mile from railway station, on line of A. S. R. R.; ¾ mile from school and churches; ½ mile from butter factory, cheese factory and milk station. Highways, state road. Nearest city, Hudson, population 11,544, 10 miles distant, reached by rail or highway. General surface of farm, rolling. Soil, mostly loam. Acres that can be used as meadow, 50; in natural pasture, 15; in timber, 15, oak, pine and hickory. Acres tillable, 150. Fruit, fine apple orchard, 18 years old, about 600 apple, 1,000 pear and 150 cherry trees. Best adapted to fruit. Fences, wire, fair condition. 11 room house, good condition, old fashioned fireplace, electric lights, power from Albany Southern company. Outbuildings: large barn, two poultry houses, ice house and sanitary cow stables. House watered by well; barns, by well. Hudson River, 2 miles distant. Occupied by owner. Reason for selling, wish to retire. Price, $20,000. Terms on application. Also 7 room tenant house. Address E. Dick, owner, Kinderhook, N. Y., R. D.

No. 175.— Farm of 123 acres; located 2 miles from Stuyvesant P. O. and railway station, on line of N. Y. C. R. R.; 2 miles from school; 2 miles from churches and 4 miles from milk station. General surface of farm, rolling. Altitude, 200 feet. Soil, clay loam and clay. Acres that can be used as meadow 80; in natural pasture 30; in timber 10, oak, hickory and a little pine. Acres tillable, 80. Fruit, apples for family use. Adapted to hay, grain, corn and potatoes. Fences, plain and woven wire, fair condition. Main house 18x25, with wing 13x17; house No. 2 18x23, with wing 14x17, fair condition. Outbuildings: barn 31x72, horse and cow barn 30x50, milk house, wagon house, poultry house and pig house. House watered by artesian well and cistern, barns same, and fields by springs and brook. Occupied by tenant. Reason for selling, owner a widow. Price on application. Address Mrs. Mary K. Best, owner, Stuyvesant, N. Y.

No. 176.— Farm of 176 acres; located 1¼ miles from Stuyvesant P. O. and railway station, on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches and 3 miles from milk station. Highways, good. Nearest city, Albany, population 107,979, 10 miles distant, reached by rail or highway. Surface of farm, rolling. Altitude, 200 feet. Soil, clay and clay loam. Acres that can be used as meadow 125; in natural pasture 25; in timber 25; pine, hickory and oak. Acres tillable, 125. Fruit, 100 apple trees of different varieties. Adapted to hay, grain, corn and potatoes. Fences, woven wire, first class condition. Two story house, in good condition. Outbuildings: wagon shed, barn, shed, horse stable cow barn, corn house, poultry house and milk house. House watered by well, barns by (windmill) well, and fields by spring and brook. Occupied by tenant. Tenant has been on farm for 30 years. Reason for selling, owner a widow. Price on application. Address Mrs. Mary K. Best, owner, Stuyvesant, N. Y. Will rent to right party with option to buy.

TOWN OF TAGHKANIC

Population 741

No. 177.— Farm of 175 acres; located 6 miles from Craryville, on line of Harlem railway; ⅛ mile from school; ¾ mile from churches, and 5 miles from milk station. Nature of highways, hilly but not rough. Nearest city, Hudson. population 11,417, 12 miles distant, reached by rail or highway. General surface of farm, part level, part rolling. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 25, oak, ash, chestnut, etc. Acres tillable, 125. Fruit, 75 apple trees, few plums and strawberries. Adapted to rye, oats, potatoes and corn. Wire and rail fences, in fair condition. House, 1½ stories, 9 rooms, good condition. Good main barn, carriage house, hog pen. 2 poultry houses. Will fill ice house this winter. House and barns watered by well; fields, by spring and stream. Occupied by owner. Price, $4,500. Terms, ½ cash, balance on mortgage 5%. Large stream near house. Address Chas. E. Scutt, Craryville, N. Y., R.D. No. 1.

CORTLAND COUNTY

Area, 485 square miles. Population, 30,074. Annual precipitation, 48.41 inches. Annual mean temperature. 47.7°. Number of farms, 2,610. Average price of land, including buildings is $31.73 per acre. County seat, Cortland.

This county lies in the central part of the state.

Its surface is hilly, rolling, and in places broken, consisting mostly of arable ridges with rich valleys between. The highlands are divided into general ridges extending north and south through the county. The northern part of the county spreads out into a high plateau broken by hills. The drainage is nearly all through the Tioughnioga river, which flows southward centrally through the county. The county is well watered, naturally drained. The soil upon the hills is principally a sand and gravelly loam; that in the valleys the same general character with a large mixture of disintegrated slate, shale and limestone. This is a distinctively agricultural county, although carriage, wirecloth and wagon manufacturing is quite extensive. Like most of the counties of New York State the ample railroad and transportation facilities bring it within easy reach of great markets. There is considerable timber scattered throughout the county, but not in large tracts. There are many maple groves from which sugar is made, the amount being given as 25,381 gallons of syrup and 118,550 pounds of sugar. There are 2,444 farms reporting domestic animals as follows: dairy cows, 20,947; horses, 5,931; swine, 3,930; sheep, 1,970; poultry, 145,268; production of milk was 15,743,198 gallons, with total receipts of sale of dairy products of $1,578,776. The leading crops are corn, shelled, 17,350 bushels; oats, 378,098 bushels; barley, 20,281 bushels; buckwheat, 40,436 bushels; potatoes, 210,326 bushels; hay and forage, 93,834 tons.

Churches and schools abound throughout the county. A State Normal School is located at Cortland. This school with the 145 district schools, graded and high schools in villages give the amplest educational facilities. Twenty-five agricultural organizations are devoted to the interest of the farmer and sixty well-located dairy stations and factories are found. Apples and other orchard fruits are successfully raised throughout the county. There is an increase of 19.6 per cent. over the value of farm property in the last decade. This increase is largely represented by live stock, machinery and implements. The price of land has declined eighty-three cents per acre in ten years, but the farm buildings are worth $1,360,000 more than in 1900. The next few years will undoubtedly change these statistics, because of the greater demand for New York farm lands which is increasing every year.

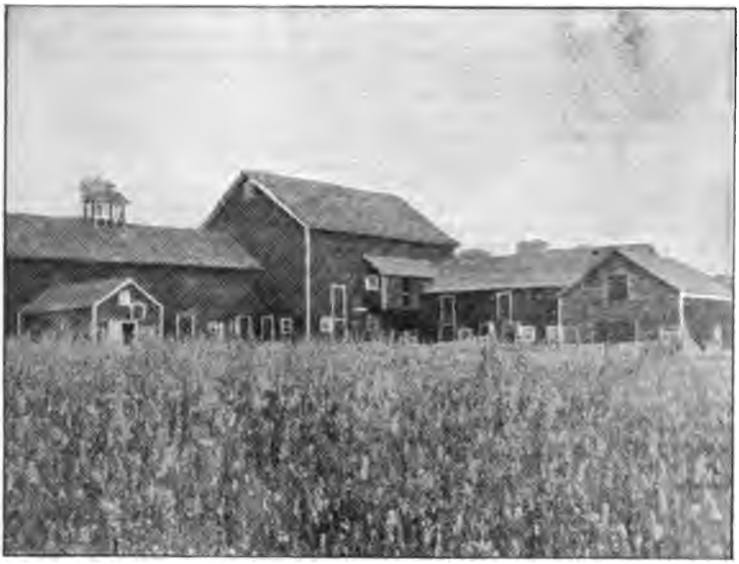


FIG. 20.— BUILDINGS ON FARM NO. 159, TOWN OF GHENT, COLUMBIA COUNTY.

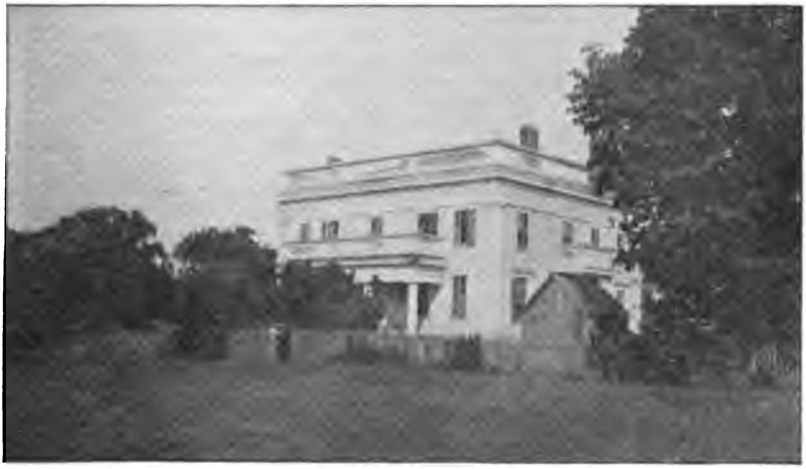


FIG. 21.— HOUSE ON FARM NO. 161, TOWN OF GHENT, COLUMBIA COUNTY.

TOWN OF CINCINNATUS

Population 958

No. 178.— Farm of 286 acres; located 3 miles from Cincinnatus P. O., R. D.; 1¼ miles from railway station at Gee Brook on line of Lackawanna R. R.; 2 miles from school, churches, butter factory and cheese factory; 3 miles from milk station. Highways, level, good condition. Nearest large village, Cincinnatus, 3 miles distant, reached by highway. Surface, nearly level, slightly sloping. Altitude, 1,040 feet. Soil, part light clay loam, balance, gravelly loam. Acres in meadow, 90; in natural pasture, 100; in timber, 50, mostly second growth. All tillable. About 60 standard apple trees, also pears, grapes, etc. Best adapted to the raising of corn, potatoes and grains. Fences, good, mostly wire. House, 12 rooms, with porch on two sides, in fine condition. Outbuildings: basement barn, 44x100, built 9 years ago; stanchions for 60 head of cattle; box stalls; horse stable; hog house for 40 hogs; poultry house; barn winters vegetables without freezing. Every convenience. Watered, house, by piped spring; barn, by spring; fields, by river and springs. Occupied by tenant. Reason for selling, owner is a widow. Price, $35 per acre. Terms reasonable. Address Mrs. Josephine Harrington, owner, Cincinnatus, N. Y. Will rent.

No. 179.— Farm of 300 acres, located 2 miles from East Freetown P. O.; 3 miles from Cincinnatus, on line of Lackawanna R. R.; station on farm, ⅛ mile from house; ¾ mile from school; 2 miles from milk station; 3 miles from churches, butter factory, cheese factory and condensing plant. Highways, good. Nearest city, Cortland, population, 12,367, 14 miles distant, reached by rail or highway. Surface of farm, gently sloping. Altitude, 1,600 feet. Soil, gravelly loam. Acres in meadow, 100; in pasture, 180; in timber, 20, mostly beech. Fences, wire, good condition. Eleven-room house, fair condition. Outbuildings: new barn, 50x100, concrete floor in basement, will hold 90 cows, stanchions now for 40, milk house with running spring water, enclosed shed, 17x160; drinking trough with running water in barnyard, pastures watered by brook, never ran dry. Occupied by tenant. Price, $5,500. Terms, part cash, balance can remain indefinitely. Address Walter S. Bull, owner, Cortland, N. Y.

TOWN OF HOMER

Population 3,745

No. 180.— Farm of 150 acres; located 3½ miles from Homer P. O., R. D. 7, and railway station, on line of D. L. & W. Ry.; ¾ mile from school; 3½ miles from churches and milk station; 6½ miles from milk condensing plant. Highways, somewhat hilly but good. Nearest large village, Homer, population 2,871, 3½ miles distant; nearest city, Cortland, population 12,367, 6½ miles distant, reached by highway. Surface of farm, nearly level. Altitude, about 1,100 feet. Soil, gravel loam. Acres in meadow, 85; in natural pasture, 55; in timber, 10, second growth beech and maple; acres tillable, 135. Fruit, fine apple orchard, also plums and cherries. Adapted to hay, grain, potatoes, cabbage and corn. Fences, mostly wire, good condition. House, 10 rooms, good. Outbuildings: barn 26x124, 22 stanchions, 3 box stalls, also room for horses; silo. Watered by well, spring and brook. Occupied by owner. Reason for selling, owner desires to retire from business. Price, $5,000. Terms, $2,250 cash, balance on mortgage at 5 per cent. Address P. O'Connor, owner, Cortland, N. Y.

TOWN OF LAPEER

Population 465

No. 181.— Farm of 240 acres; located 2 miles from Marathon P. O., R. D. No. 2, and railway station, on line of D. L. & W. R. R.; ¾ mile from school; 2 miles from churches; 1¼ miles from butter factory and cheese factory; 2 miles from milk station and condensing plant. Highways, good. Nearest city, Cortland, population 12,367, 14 miles distant, reached by rail or highway. General surface, level and a little rolling. Altitude, 1,351 feet. Nature of soil, good. Acres that can be used as meadow, 180; in natural pasture, 80; in timber, 60, maple, beech, ash, hickory, basswood, cherry, hemlock and pine. Acres tillable, 180. Fruit: plums, pears, apples, cherries, etc. Fine maple sugar orchard of over 2,000 trees. Adapted to all kinds of crops. Fences: board, rail and wire, in good condition. House, large, with two wings and wood house, in good condition. Outbuildings: barn, 36x80, nearly new; granary, 22x28; horse barn, 30x52; barns, 24x28 and 30x48. House watered by well, barns by spring and well, fields by creek and springs. Tioughnioga river, 2 miles distant. Occupied by owners. Reason for selling, ill health. Address O. A. & J. H. House, owners, R. D. No. 2, Marathon, N. Y. Owners will rent with option to buy.

TOWN OF MARATHON

Population 1,500

No. 182.— Farm of 220 acres; located 2½ miles from postoffice (R. D. No. 2) and railway station at Marathon on line of D. L. & W. R. R.; ½ mile from school and church; ¼ mile from cheese factory and milk station. Good highways. Nearest village, Marathon, population, 1,006, distant 2½ miles, reached by highway. General surface of farm, rolling and partly level. Altitude, 700 feet. Soil, clay loam, good quality. Acres that can be used as meadow, 120; in natural pasture, 50; in timber 50, hemlock, beech, hard maple, basswood; acres tillable, 120. Fruit: 25 apple trees. Best adapted to wheat, rye, oats, barley, corn, potatoes. Barbed wire fences in good condition. House of 11 rooms in first-class condition. Two barns, 30x60 and 30x50; horse and hog barn; new chicken house, 12x40; duck house; granary; tool house. House watered by well inside; barns by springs; fields by springs and creek. Tioughnioga River, 1½ miles distant. Farm now occupied by owner. Reason for selling, owner has other interests requiring attention. Price, $7,000. Terms, $2,000 down, rest on easy terms. Address J. Albrectsen, Marathon, N. Y.

No. 183.— Farm of 67 acres; located 2½ miles from postoffice (R. D. No. 2) and railway station at Marathon, on line of D. L. & W. R. R.; ½ mile from school and church; ⅛ mile from cheese factory and milk station. Good highways. Nearest village Marathon, population, 1,006, distant 2½ miles, reached by highway. General surface of farm, rolling and partly level. Altitude, 700 feet. Soil, clay loam, good quality. Acres that can be used as meadow, 37; in natural pasture, 20; in timber, 10, hemlock, beech, pine and maple. Acres tillable, 37. Ten apple trees. Best adapted to rye, oats, corn, potatoes. Barbed wire fences in good condition. House of 7 rooms in good condition. Barn, 50x30, in fair condition; 2 sheds in fair condition. House watered by well; barn and fields by creek. Tioughnioga river 1½ miles distance. Farm now occupied by owner. Reason for selling, owner has other interests requiring attention. Price, $2,500. Terms, $500 down, balance easy terms. Farm can be run to best advantage as a dairy farm, with effort in direction of specializing in potatoes. Address J. Albrectsen, Marathon, N. Y.

DELAWARE COUNTY

Area, 1,580 square miles. Population, 45,995. Annual precipitation, 42.7 inches. Annual mean temperature, 45.7°. Number of farms, 5,044. Average price of farm land, including buildings, is $26.65 per acre. County seat, Delhi.

Delaware stands the sixth largest county of the state and is located centrally. Its surface is a hilly and mountainous upland, divided into three general ridges by the valleys of the two branches of the Delaware river. In the southern part these ridges form a mountainous region, with high rocky peaks and wild, narrow ravines. In the northern part, the highlands are less wild and precipitous and the whole region assumes the character of a hilly upland. The soil is generally of a dark reddish color and composed of disintegrated rock and shale. In the valleys are many strips of very fertile alluvium. There is considerable fine woodland on the higher portions of the county. The wells, springs, streams, rivers, ponds and lakes are very numerous and remarkable for their purity and clearness, and the streams are also noted for the enormous water power they afford.

Dairying is the principal pursuit and the county has become famous for its quality of butter. There are excellent facilities for transportation of all products to the markets of the state, the county being but a short distance from New York City. The valuation of farm property is placed at $27,714,855, a 25 per cent increase in 10 years. Domestic animals are classified as follows: dairy cows, 73,440; horses, 11,831; swine, 11,697; sheep, 3,922; poultry, 320,105. The total production of milk was 41,144,471 gallons, and the total receipts from the sale of dairy products was $4.724,951, these figures being excelled only by St. Lawrence County.

The principal crops are as follows: corn, shelled, 12,637 bushels; oats, 488,570 bushels; buckwheat, 75,586 bushels; potatoes, 229,284 bushels; hay and forage, 108,016 tons. Apples are grown in abundance and are of the finest quality.

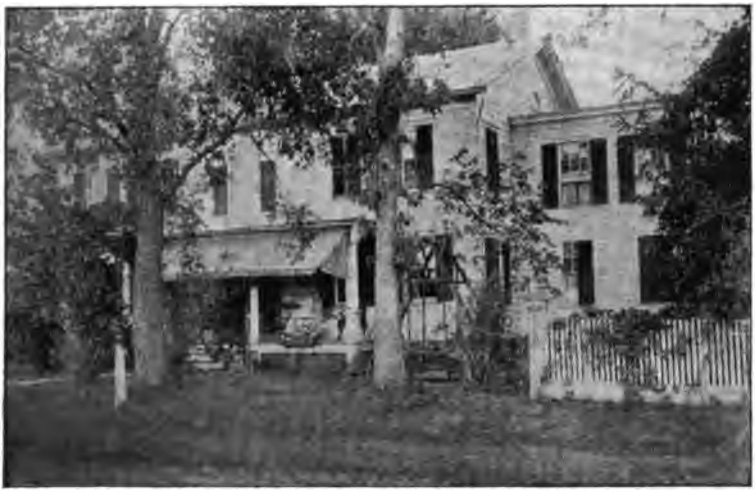


Fig. 22.— House on Farm No. 164, Town of Kinderhook, Columbia County.

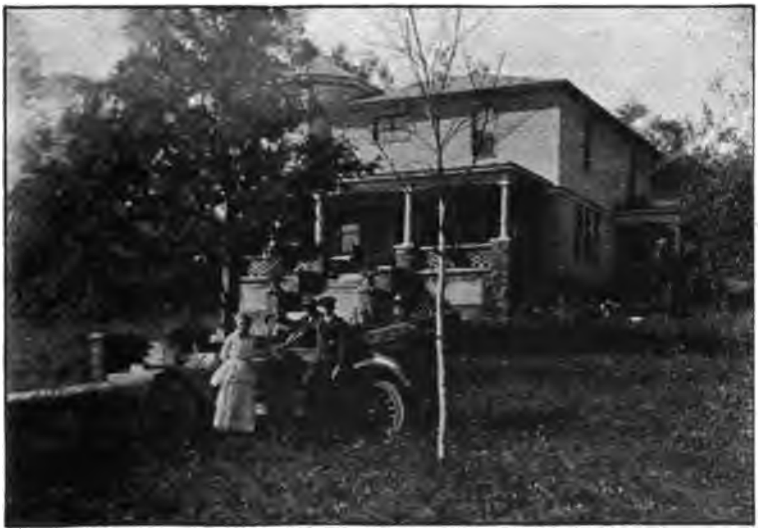


Fig. 23.— House on Farm No. 251, Town of Coxsackie, Greene County.

Churches of different denominations are scattered throughout the county and 346 district schools are conveniently located. Twenty-four agricultural associations are devoted to the best interests of the farmer. There are 68 dairy stations and factories in the county averaging over three to each town. Forty-two miles of state road and 2,220 miles of improved highway furnish excellent local transportation facilities.

TOWN OF ANDES

Population 2,084

No. 184.— Farm of 350 acres; located 60 rods from Union Grove P. O.; railway station on farm, on line of D. & N. R. R.; ¼ mile from school and churches; 2 miles from butter factory and cheese factory; ⅛ mile from milk station and 6 miles from condensing plant. Highways, good dirt roads, proposed state road. General surface, 100 acres river flat, balance rolling. Altitude, 1,250 feet. Nature of soil, loam and red slate, some gravel. Acres that can be used as meadow, 150; in natural pasture, 100; in timber, 100; timber reserved except enough for use of farm. Fruit, several apple trees. Adapted to corn, oats, buckwheat, rye and hay. Fences, mostly woven wire, new. House, frame, 28x50, 2 stories, large veranda; also tenant house, 24x40, fair condition. Outbuildings: 2 small barns, 2 hay barns, sheds, etc. House watered by springs; barns, by springs; and fields, by springs and river. In Catskill Mountains; Delaware river runs length of farm for a mile; good location, fishing, etc. Occupied by caretaker. Reason for selling, bought it for timber and gravel bank, no use for farm. Price, $9,000. Terms, ⅓ cash, balance, partial payments. Address W. T. Austin, owner, Margaretville, N. Y.

No. 185.— Farm of 8 acres; located at Union Grove; 60 rods from railway station at Union Grove, on line of D. & N. R. R.; near school; 2 miles from churches; 2 miles from two butter factories; 6 miles from cheese factory and condensing plant. Milk station near by. Highways, good. General surface, slightly rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, all; now used as meadow, 4; in natural pasture, 4. Acres tillable, all. Fruit: apples, pears, cherries and small fruit. Adapted to all crops. Fences, wall and wire. 15 room house, good condition. Barn, 24x42, with shed attached, 15x40; barn, 18x22; 2 poultry houses and ice house. Watered, house, by springs; barns, by spring; and fields by spring. Occupied by owner. Reason for selling, death of husband. Price, $3,500. Terms, ½ cash, balance on easy terms. Address Mary C. Van Kenren, owner, Union Grove, N. Y.

No. 186.— Farm of 258 acres; located 3 miles from Andes P. O., R. D., and railway station on line of Delaware & Northern R. R.; 1 mile from school; 3 miles from churches, butter factory and milk station. Highways, state road. Nearest village, Delhi, population 1,743, 11 miles distant, reached by rail or highway. General surface, rolling and level. Altitude, 2,000 feet. Acres that can be used as meadow, 100; in pasture, 100; in timber, 58, hard wood. Acres tillable, 200. Fruit, 100 apple, 20 pear, 10 cherry and 12 plum trees. Adapted to oats, corn, buckwheat, millet, etc. Fences, stone wall and wire. House, 30 x 40; furnace, hot and cold water. Outbuildings: barn, No. 1, 32x80, new stanchions for 40 cows and 4 horses; No. 2, 26x70; horse barn, 26x36; tool house, 20x24; barn equipped with milking machine; house and barns watered by springs; fields, by springs and brooks. Occupied by owner. Reason for selling, poor health. Price, $8,000. Terms to suit purchaser. Will sell personal property, if desired. Address, Charles T. Hyzer, owner, Andes, N. Y. Owner will rent.

No. 187.— Farm of 336 acres; located 1 mile from postoffice at Andes; 1¼ miles from railway station at Andes, on line of Delaware and Northern R. R.; 1¼ miles from school; 1⅛ miles from churches, butter and cheese factories; 1¼ miles from milk station and condensing plant. Good highways, mostly state road. Nearest village, Delhi, population, 1,743, distant 12 miles, reached by state road. General surface of farm, meadow level and rolling, pasture hilly. Altitude, 1,768 feet. Acres that can beused as meadow, 80; number now so used, 50; in natural pasture, 100; in timber, 150, maple, ash, oak, chestnut, cherry, beech, birch and basswood. Fruit trees, 35 apple, 9 pear, 20 plum, 6 cherry, 2 grape vines. Adapted to oats, corn, potatoes, buckwheat, millet and hay. Stone wall and wire fences. Fourteen-room house with good cellar. Large overshot barn; good wagon house; sheep barn with granary; hog house and hen house. House, barns and fields watered by springs. Craigs Mt. on farm; Grey Mt. to east; Pisgah about 5 or 6 miles northeast. Reason for selling, to settle estate. Price, $5,500. Terms, $3,500 down and first mortgage of $2,000. This is a very good dairy and sheep farm. Address Mrs. Elizabeth J. Craig, Administratrix, Andes, N. Y.

TOWN OF COLCHESTER

Population 3,250

No. 188.— Farm of 160 acres; located 3 miles from postoffice at Roscoe; 3 miles from railway station at Roscoe, on line of N. Y. O. & W. R. R.; 1 mile from school; 3 miles from churches and milk station. Highways, 1 mile hill road, fair, 2 miles state road. Nearest village, Roscoe, population about 1,400, distant 3 miles, reached by highway. General surface of farm, rolling. Altitude, 1,600 feet. Nature of soil, good loam. Acres that can be used as meadow, 40; in natural pasture, 60; in timber, 60, maple, beech, birch. Acres tillable, 60. Large apple orchard. Adopted to potatoes, oats, rye and hay. Stone and woven wire fences in good condition. Seven-room house in good condition. Large overshot barn, concrete floor, will keep 35 cows and team; pig house; chicken house. House, barn and fields watered by springs. Beaver Kill, 1 mile distant. Farm now occupied by owner. Reason for selling, owner retiring. Price, $3,000. Terms, cash. Farm has sugar orchard of 600 trees. Address John T. Rogus, Roscoe, N. Y.

TOWN OF FRANKLIN

Population 2,222

No. 189.— Farm of 60 acres; located 1 mile from postoffice (R. D. No. 1) at Franklin; 4 miles from railway station at Franklin Depot, on line of O. & W. R. R. and 7 miles from Unadilla on the D. & H. R. R.; 1 mile from school and churches; 1 mile from two milk receiving stations; 1½ miles from Borden's condensing plant. Highways, good, fairly level dirt roads. Nearest city, Oneonta, population, 10,474, distant 11 miles, reached by highway. General surface of farm, two flats, and cow pasture is rolling. Altitude, 1,000 feet. Soil, some dark and some red; very few stones. Acres used as meadow, about 35; in natural pasture, about 25; number tillable, 60. Timber, young maple. Fruit, enough apples for home use; 3 pear trees; 1 young cherry tree. Best adapted to oats, corn, buckwheat, millet, all vegetables. Stone wall and barbed wire fences, in good condition. House of 12 rooms. Barn about 40x40, concrete floor in cow stable; room for 18 cows; 1 box stall and 2 horse stalls; Unadilla silo; pig sty; smoke house; shop; granary; 1 long wagon shed. House and barns watered by running water; fields by springs. Farm located on Handsome brook and 1 mile from Ouleout river. Now occupied by owner. Price, $4,300. Terms, half cash down. Reason for selling, death of husband; widow unable to work farm properly. Address Mrs. A. Cronauer, Franklin, N. Y., R. F. D. 1.

TOWN OF HANCOCK

Population 4,908

No. 190.— Farm of 127 acres; located ⅛ mile from French Woods P. O.; 4 miles from railway station at Lordville, on line of Erie and O. & W. R. Rs.; ¼ mile from school and churches; 4 miles from milk station, butter factory, cheese factory and condensing plant. Highways, good dirt road. Nearest village, Hancock, population 1,356, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, about 1,800 feet. Soil, red shale, very good. Acres in meadow, 60; in natural pasture, 40; in timber, 15, hardwood. Acres tillable, 100. Fruit, large orchard of apples, pears and plums. Adapted to hay, corn, potatoes, etc. Fences, wire and stone, fair condition. House, almost new, 55 x 35, 29 rooms. Outbuildings, barn, 36 x 60, good condition; ice house, shop and dancing pavilion, 30x60, good condition. Watered, house, by running water; barns, by springs; fields, by creeks. 96 acres in lake and ⅓ of it belongs to this property. Reason for selling, owner wishes to retire. Price, $8,500. Terms, $5,000 cash, balance on mortgage. Address Frank L. Gardner, owner, French Woods, N. Y.

TOWN OF HARPERSFIELD

Population 1,223

No. 191.— Farm of 253 acres; located 1 mile from Harpersfield P. O.; 4 miles from railway station at Stamford on line of U. & D. Ry.; ¼ mile from school; 1 mile from churches; 3 miles from butter factory, cheese factory and condensing plant; 4 miles from milk station.

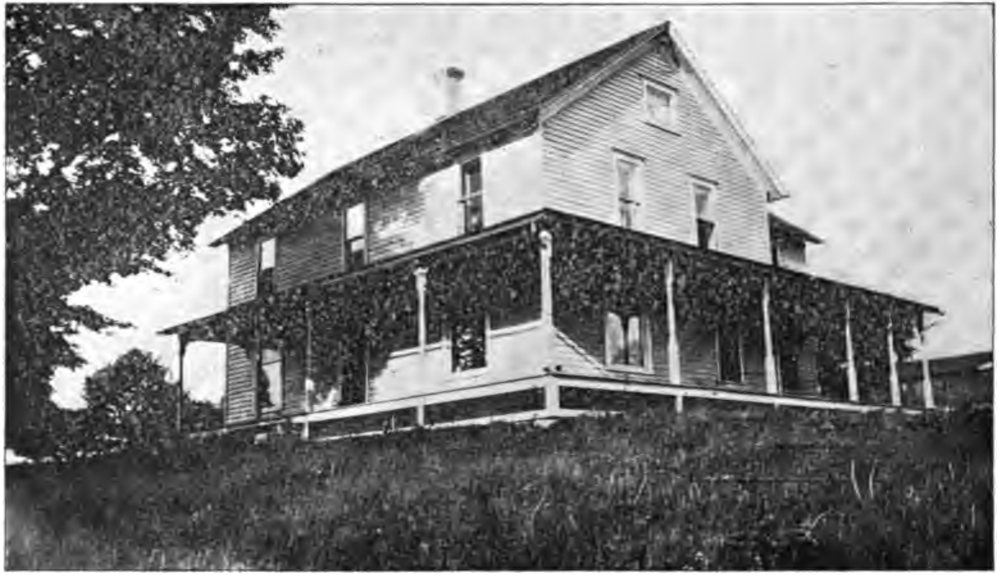


FIG. 24.—HOUSE ON FARM NO. 178, TOWN OF CINCINNATUS, CORTLAND COUNTY.

Highways, in good condition, near state road. Nearest large village, Stamford, population 1,060, 4 miles distant. General surface of farm, rolling and level. Acres in meadow, 70; in pasture, 140; in timber, 25, maple, pine and hemlock. Acres tillable, 100. Fine young apple orchard. Adapted to corn, oats, potatoes, buckwheat, hay and rye. Fences, wall and wire, in good condition. House, 2 stories, in good condition. Outbuildings: 2 cow barns, horse barn, hog and poultry house, granary, feed room, silo, 15x15x26. House, barn and fields watered by wells and springs. Catskill mountains and Delaware river, nearby. Occupied by tenant. Reason for selling, other business. Price, $5,000. Terms, part cash, balance on mortgage. Cows, horses, young stock and tools may be purchased if desired. Owner will rent. Address Mrs. M. S. Wilcox, owner, Jefferson, N. Y.

TOWN OF MASONVILLE

Population 988

No. 192.— Farm of 15 acres; located 1 mile from Unadilla P. O., R. D. 2; 4 miles from railway station at Maywood, on line of O. & W. R. R.; 1½ miles from school; 2 miles from cheese factory and Protestant churches; 4 miles from milk station and milk condensing plant. Highways, good. Nearest large village, Sidney, population 2,641, 7 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,400 feet. Soil, loam. Acres in meadow, 8; in natural pasture, 7. Acres tillable, 15. Fruit, 9 apple trees. Best adapted to truck gardening and hay. Fences, wire, stone wall and rail, good condition. House, small, 4 rooms below, upper part not finished. Outbuildings: good sized barn, fair condition, poultry house and granary. Watered, house, by well; barn, by spring; fields, by creek. Reason for selling, owner a widower and obliged to break up housekeeping. Price, $1,000 cash, or $1,100 with payment of $600 cash and remainder on mortgage. Address E. A. Fletcher, owner, Hamilton, N. Y. Owner will rent.

No. 193.— Farm of 162 acres; located 3½ miles from Masonville P. O.; 9 miles from railway station at Sidney, on lines of D. & H. and O. & W. R. Rs., near school; 3½ miles from churches, butter and cheese factories and milk station. Highways, rolling, but in good condition. Nearest large village, Sidney, population 2,641, 9 miles distant, reached by highway. Surface, rolling and partially hilly. Acres in meadow, 60; in natural pasture, 75; in timber, 25; acres tillable, 140. Fences, wire and rail, poor condition. House, 8 rooms, poor condition. Barn, in poor condition. Watered, house, by running water and wells; fields, by springs. Occupied by owner. Reason for selling, owner has other business. Price, $1,500. terms, $600 cash, balance on mortgage. Address F. L. Ostrander, owner, Masonville, N. Y. Will rent.

TOWN OF MEREDITH

Population 1,472

No. 194.— Farm of 173 acres; located 7 miles from Delhi P. O., R. D. 2; 3 miles from railway station at East Meredith, on line of U. & D. R. R.; 3 miles from church; 1 mile from school and milk station; 7 miles from butter factory, cheese factory and condensing plant. Nearest city, Oneonta, population 10,474, 12 miles distant. Surface of farm, rolling. Altitude, about 1,700 feet. Acres in meadow, 50; in natural pasture, 80; in timber, 43, hard wood; acres tillable, 150. Fruit, apples and pears. Best adapted to hay and potatoes. Fences, stone and wire, good condition. House, 16 rooms, good condition. Barn, 30x40; wagon house, 28x38; storage building, 26x36; hog house, etc. Watered by living springs. Occupied by owner. Reason for selling, poor health of owner. Price, $6,000. Terms, cash. Address Miss Johanna R. Spier, owner, Delhi, N. Y., R. D. 2.

TOWN OF SIDNEY

Population 4,215

No. 195.— Farm of 135 acres; located ¼ mile from P. O., and railway station at Franklin Depot, on line of O. & W. R. R.; ¼ mile from school and milk station; 2½ miles from churches; 4 miles from butter factory and 3 miles from condensing plant. Highways, good. Nearest large village, Walton, population 3,606, 10 miles distant, reached by rail and highway. Surface, nearly level, part, slightly rolling. Soil, red and part rich loam. Acres in meadow, 60; in natural pasture, 65; in timber, 5, beech, birch and maple; acres tillable, 100. Fruit, apples. Best adapted to hay, grain and potatoes. Fences, wire, board and stone wall. House, 24x36, with wing, 24x38, 12 rooms, good condition.

Outbuildings: barn, 28x64, cow stable attached, with new concrete floors; barn, 26x36, wagon house attached, 5 good horse stalls, silo, poultry house and granary. Watered, house, by never failing spring; barns and fields, by spring and creek. Occupied by tenant. Reason for selling, advanced age of owner. Price, $4,000. Terms, $1,200 cash, balance on mortgage, 5%. Will sell 25 cows, if desired. Address M. B. Fish, owner, Sidney, N. Y.

No. 196.— Farm of 230 acres; located ½ mile from Walton P. O., R. D. No. 3; 3 miles from railway stations at Franklin and Maywood, on line of N. Y. O. & W. R. R.; 1 mile from school; 1 mile from churches; 1 mile from butter factory; 3 miles from cheese factory; 1 mile from milk station and 8 miles from condensing plant. Highways, good. Nearest large village, Walton, population 3,606, 8 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,800 feet. Nature of soil, loam. Acres that can be used as meadow, 150; in natural pasture all, except timber; in timber 70, oak, chestnut, maple, ash, beech and some pine. Acres tillable, 150. Fruit, 20 apple, plum and pear trees. Best adapted to hay, corn and oats. Fences, stone wall and barbed wire, good condition. House, 9 rooms, built 10 years. Outbuildings: barn 38x56, built in 1912; wagon house 30x40, good frame; hog pen and poultry house, new. House watered by spring; barns by spring; and fields by spring. Reason for selling, ill health. Price, $6,000. Will sell personal property, if desired. Address Mrs. Edith Forsyth Wheat, owner, Franklin, N. Y., R. D.

No. 197.— Farm of 120 acres; located 1½ miles from Franklin station, on line of O. & W. R. R.; 1 mile from school and churches; 1½ miles from butter factory, cheese factory and milk station; 3 miles from condensing plant. Highways, good. Nearest city, Oneonta, population 10,474, 15 miles distant, reached by rail or highway. General surface, level. Nature of soil, loam. Acres that can be used as meadow, 80; in natural pasture, 65; in timber, 30, pine, hemlock, chestnut, oak and ash. Acres tillable, 90. Fruit, 30 apple and 12 plum trees. Adapted to hay, oats, corn, wheat and buckwheat. Fences, stone wall and barbed wire. House, 30x46, in good condition. Outbuildings: barn, 36x36; barn, 24x40; wagon house, 24x30; granary and woodhouse. Watered, house, by well; barns, by stream; and fields, by springs. Occupied by tenant. Reason for selling, other business. Price, $5,000. Address Mr. & Mrs. D. D. Wheat, Franklin, N. Y., R. D. 1. Owner will rent.

TOWN OF WALTON

Population 5,275

No. 198.— Farm of 189 acres; located 1½ miles from Beerston P. O.; 2 miles from railway station at Beerston, on line of N. Y. O. & W. R. R.; 1¼ miles from school and church; 2 miles from milk station and 6 miles from condensing plant. Highways, state road. Nearest village, Walton, population 3,606, 6 miles distant, reached by rail and highway. General surface of farm, slightly rolling, pastures hilly. Altitude, 1,214 feet. Nature of soil, sand and gravel loam. Acres used as meadow, 60; in natural pasture, 40; in timber 89; second growth of hard wood. Acres tillable, 85. Fruit: 100 apple trees; small quantity of cherry, plum and pear trees and small fruits. Adapted to hay, corn, oats, potatoes and buckwheat. Fences wire and stone wall, in need of repair. House, 26x32x22, in good condition. Outbuildings: barn, 45x130x28; poultry house, 18x90; old barn, 30x40x14, in good condition. Watered, house by spring; barns, by spring; and fields, by river and spring. A maple orchard of 500 trees; house and barn lighted with acetylene gas, bath in house. Occupied by owner. Reason for selling, old age. Price, $13,500. Terms, $8,000 cash, balance on mortgage at 5%. Address John Q. Barlow, Beerston, N. Y.

DUTCHESS COUNTY

Area, 810 square miles. Population, 91,044. Annual precipitation, 54.1 inches. Annual mean temperature, 50.9°. Number of farms, 3,600. County seat, Poughkeepsie.

This county lies on the eastern line of the state bounded by Connecticut on the east and by the Hudson river on the west, about midway between Albany and New York City.

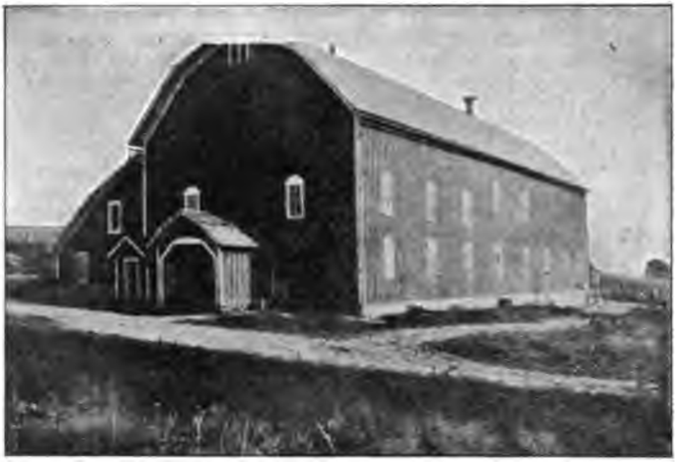


FIG. 25.— BARN ON FARM NO. 178, TOWN OF CINCINNATUS, CORTLAND COUNTY.

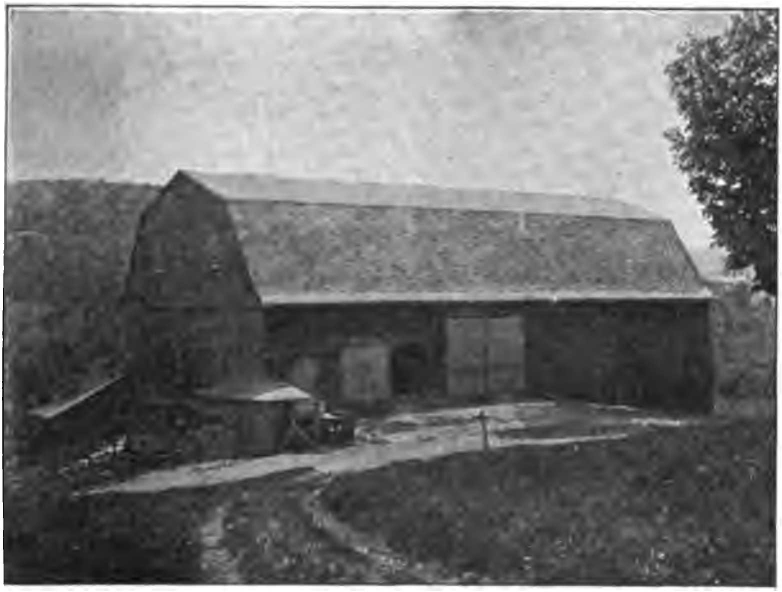


FIG. 26.— BARN ON FARM NO. 179, TOWN OF CINCINNATUS, CORTLAND COUNTY.

Its surface is principally rolling and hilly. A wide valley running north and south through the entire central portion of the county, bounded on the east by the Taghkanic mountains and on the west by the Matteawan and Fishkill ranges. Within this valley lie some of the finest farms of the state. The county is rich in mineral rocks and near its center there are quarries of marble, pure, white, fine grained and susceptible to high polish. The soil of the county is generally of a fine quality of sandy and gravelly loam. Agriculture is the leading industry and offers attractions to the farmer on account of the variety and fertility of the soil and the nearness to the markets of New York City. As choice apples as can be grown anywhere are grown in this county, many of which are exported to Europe. The principal crops are: corn, shelled, 267,515 bushels; oats, 489,162 bushels; wheat, 33,770 bushels; buckwheat, 86,468 bushels; rye, 61,760 bushels; potatoes, 191,131 bushels; hay and forage, 83,768 tons. Domestic animals are reported as follows: dairy cows, 25,572; horses, 9,757; swine, 12,404; sheep, 7,510; poultry, 289,212. The average price of farm land with buildings is $58.52 per acre. The total valuation of all farm property is $32,968,710, an increase in 10 years of nearly $8,000,000. This increase is exceeded only by six other counties of the state. The dairies of the county produced 18,869,564 gallons of milk and the receipts for the sale of dairy products were $2,084,655.

There are twenty-nine agricultural organizations in the county, including twenty-four granges; also thirty-two milk stations and factories. The educational advantages are extraordinary, there being 183 district schools, several standard high schools and St. Stephen's College at Annandale. Vassar, one of the leading women's colleges in the country, is located at Poughkeepsie as well as private and military academies. Dutchess county presents great possibilities for farm investment and general farming, in common with a large number of the other counties of the state.

TOWN OF EAST FISHKILL

Population 2,173

No. 199.— Farm of 190 acres; located 1 mile from Hopewell Junction, R. D. and railway station, on line of N. Y., N. H. & H. and C. N. E. R. Rs.; ½ mile from school; ¼ mile from churches and 1 mile from milk station. Highways, good. General surface of farm, slightly rolling. Altitude, 1,000 feet. Nature of soil, first class loam. Acres that can be used as meadow 160; in natural pasture 20; in timber 10, mostly oak. Acres tillable, 160. Fruit, 125 apple trees, Baldwins. Adapted to all kinds of crops. Fences, stone wall, good condition. House, main part 45x30½, kitchen and dining room 42x28. Outbuildings: cow barn 51x30, barn No. 2 31x17, large barn, stanchions for 26 cows and small barn. House watered by spring, barns by running water, and fields by brooks and springs. Occupied by tenant for one year. Reason for selling, owner retired. Price, $15,000. Terms, cash. Buildings in first class condition, house painted white, outbuildings painted red. Address J. D. Buck, owner, 18 Willow street, Beacon, N. Y.

TOWN OF FISHKILL

Population 3,214

No. 200.— Farm of 160 acres; located 1½ miles from Hopewell Junction P. O. and railway station, on line of C. N. E. and N. Y., N. H. & H. R. Rs.; 1 mile from school; 1 mile from churches and milk station. Highways, state road. General surface of farm, slightly rolling. Altitude, 1,000 feet. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, about 40; in timber 20, variety. Acres tillable, 125. Fruit, about 50 apple trees, different varieties. Adapted to all kinds of crops. Fences, stone wall, in good condition. House 45x55, 10 rooms, excellent condition. Outbuildings: cow barn 41x59, horse barn 24x57, stock barn 17x30, poultry house and scratch shed 12x53, granary and tool house 19x22, wood house 10x12, pig house 10x36, all in excellent condition. House watered by well, barns by windmill, and fields by brooks and springs. Occupied by tenant. Worked on shares; leased for one year. Reason for selling, owner retired. Price, $10,000. Terms, cash. Excellent farm. Address J. D. Buck, owner, 18 Willow street, Beacon, N. Y.

TOWN OF HYDE PARK

Population 3,144

No. 201.— Farm of 95 acres; located 3½ miles from Poughkeepsie P. O., R. D. 1 and railway station on line of N. Y. C. R. R.; ¾ mile from school; 3½ miles from churches; 3 miles from milk station. Highways, good, some state road. General surface of farm, rolling.

Nature of soil, loam. Acres in meadow, 12; in pasture, 10; in timber, 8, oak, elm and chestnut; acres tillable, 65. Fruit, 20 apple trees, small fruit for home use. Fences, stone, in good condition. House, main part 30x40, 2 stories, addition 18x24, 1½ stories, 11 rooms. Outbuildings: wagon house, 39x40, new; old wagon house, 24x20; barn No. 1, 33x45, barn No. 2, 45x18; poultry house, 20x30; wood house, 18x18 and corn crib, 3 green houses, each 120 feet long, all in good condition. House watered by well and cistern; barns, by windmill and creek; fields, by springs and brooks. Occupied by tenant. Reason for selling, to settle estate. Price, $10,000. Terms, ½ cash, balance on mortgage. Address Mrs. K. C. Todd, owner, R. D., Poughkeepsie, N. Y. Will rent.

TOWN OF MILAN

Population 824

No. 202.— Farm of 394 acres; located 7 miles from Red Hook P. O., R. D. No. 45; 1½ miles from railway station at Jackson Corners, on line of C. N. E. R. R.; adjoining school; 2 miles from churches and 6 miles from milk station. Highways, hilly. Nearest village, Pine Plains, 5 miles distant, reached by rail and highway. General surface, half rolling and half hilly. Altitude, 300 feet. Nature of soil, clay loam and slaty. Acres that can be used as meadow 275; in natural pasture 150; in timber 120, chestnut, white oak and a little pine; probably $3,000 worth of good timber and lots of hardwood. Acres tillable, 400. Fruit: 600 apple trees, a few bearing pears, number of cherry trees and plenty of grapes. Adapted to hay, corn, rye, oats, etc. Ideal dairy farm or magnificent site for commercial orchard. Fences, stone and rail, fair condition. House, (1) 12 rooms, splendid condition; (2) 15 rooms, and (3) 4 room cabin, suitable for help. Outbuildings: 6 barns, one recently remodeled, 5 others, fair condition; silo, wagon shed, big shop; barns will average about 40x60. Houses watered by wells, barns by 2 springs and other wells, fields by brook and springs. Occupied by owner. Reason for selling, has another farm. Price, $15,000. Terms, half cash. Would divide farm so each would have a house and 3 barns; $9,000 for most desirable half, $6,500 for other half. Address James Taylor Petty, owner, Red Hook, N. Y., R. D. No. 45.

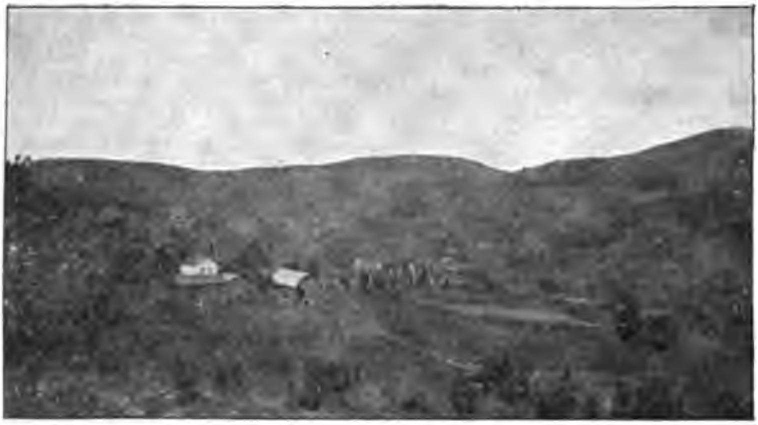
TOWN OF NORTHEAST

Population 2,342

No. 203.— Farm of 180 acres; located 1¼ miles from Boston Corner P. O., R. D. 34, from Millerton; 1½ miles from railway station at Boston Corner, on line of N. Y. & Harlem and C. N. E. R. Rs.; ¾ mile from school; 1¼ miles from milk station. Highways, good. Nearest large village, Millerton, population 890, 6 miles distant, reached by rail and highway. Soil, lime and gravel loam, high state of cultivation. Acres in meadow, 80; in natural pasture, 60; in timber, 40, chestnut, oak and maple; acres tillable, 140. Fruit: apples, pears, cherries and plums. Adapted to corn, hay and all kinds of grain. Fences, mostly wire, some wall and rail, good condition. House, 24x40, piazza whole length, 2½ stories, 12 rooms. Outbuildings: barn, 32x66; horse and carriage barn, 30x66, with ell, 12x24; sheds, tenant house and barn. Watered by well, cistern, springs and brook. Occupied by owner and tenant. This farm keeps dairy of 20 to 25 cows; cuts 60 to 75 tons of hay. The house is well shaded by maple and chestnut trees and is situated on high ground overlooking the Harlem valley. Barns are painted and modern; dairy improvements. Reason for selling, advanced age of owner. Price, $12,500. Address Chas. E. Lloyd, owner, Millerton, N. Y., R. D. 34.

No 204.— Farm of 700 acres; located 1 mile from Millerton P. O., on line of Harlem R. R.; 1½ miles from school; 1 mile from churches and milk station. Highways, state road. Nearest village, Millerton, population 890, 1 mile distant, reached by highway. General surface, slightly rolling. Altitude, about 600 feet. Acres tillable, 600. Fruit, apple orchard, some cherries, plums and other small fruit. Adapted to hay, corn, oats, wheat and rye. Fences, rail, stone and wire, in poor condition. House, large frame, in good condition. Outbuildings: dairy barn and horse barn, in fair condition. Watered, house, by well; barns by spring; and fields, by stream. Occupied by owner. Price, $50,000. Terms, reasonable. Address W. B. Culver, owner, Amenia, N. Y.

No. 205.— Farm of 340 acres; located 4 miles from Millerton P. O., on line of Harlem R. R.; 1½ miles from school



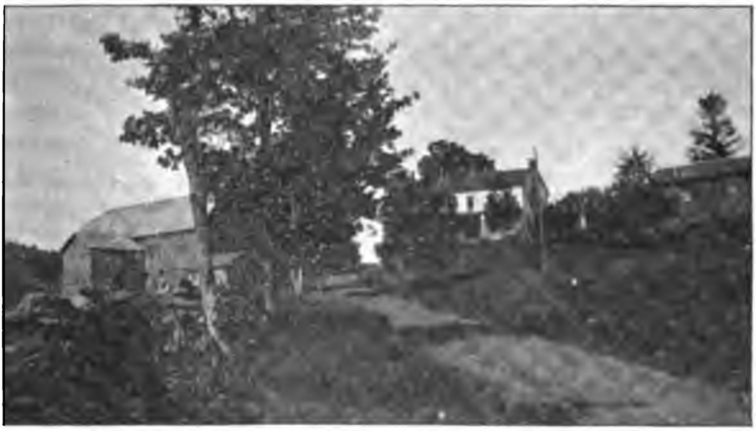


FIG. 27.— VIEWS ON FARM NO. 186, TOWN OF ANDES, DELAWARE COUNTY.

and 4 miles from churches and milk station. Highways, state road. Nearest village, Millerton, population 890, 4 miles distant, reached by highway. General surface, rolling and level. Altitude, 600 feet. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 250; in natural pasture, 70; in timber, 10, chestnut. Acres tillable, 250. Fruit: apples, cherries, pears and plums. Adapted to hay, oats, corn, wheat and rye. Fences, rail and wire, in good condition. Barns, large and in good condition. House, large and in good condition. Watered, house, by well; barns, by reservoir; and fields, by stream. Occupied by owner. Reason for selling, to settle an estate. Price, $22,000. Terms, reasonable. Address Mrs. Cora B. Killmer, owner, Amenia, N. Y.

TOWN OF PINE PLAINS

Population 1,387

No. 206.— Farm of 585 acres; located 1 mile from Pine Plains P. O.; ¼ mile from railway station at Briar Cliff on line of C. N. E. R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory; ¼ mile from milk station. General surface of farm, level. Altitude, 300 feet. Acres can be used as meadow, 486; in timber, 100, pine and hardwood. Acres tillable, 486. Fruit, apples, pears and cherries. Adapted to general farming. Fences, wire, fine condition. House, 40x30 with extensions, 15 rooms; 3 tenant houses, fair size, 2 stories; 4 large barns. Houses and barns watered by springs. Lake Stissing on property. Property runs to top of Mt. Stissing. Occupied by tenant. Reason for selling, to settle estate. Price, $50 per acre. Heirs of Charles C. More estate, care Frederick R. Keator, attorney, 22 Exchange place, New York City.

TOWN OF RED HOOK

Population 3,808

No. 207.— Farm of 108 acres; located 1 mile from P. O.; ½ mile from railway station, on line of C. N. E. R. R.; 1 mile from school and churches; ½ mile from butter factory and milk station. General surface, mostly level. Nature of soil, gravel loam. Acres that can be used as meadow, 15; in timber, 8, mostly white oak. Acres tillable, 100. Fruit, apples, pears, etc. Fences, stone and wire. House, frame, 30x40, in good condition. Barn, 40x52, with basement; shed, 20x40; hay barn, 20x28; poultry house, 11x28;; hog house, 14x21; creamery; ice house; shop, 24x18; new sheds, 38x18 and 30x20; 2 violet houses. Watered, house, by well; fields, by ponds. Occupied by owner. Reason for selling, wish to retire. Price, $9,000. Terms, ½ cash, balance on mortgage. Address Julius Moul, owner, Red Hook, N. Y. Will rent.

No. 208.— Farm of 108 acres; located 2 miles from Red Hook postoffice; 5 miles from railway station at Barrytown, on line of N. Y. C. R. R.; 2 miles from school, churches and milk station. Good highways. Nearest city, Poughkeepsie, population 32,714, distant 22 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil, loam. Acres tillable, 108. About 400 fruit trees: apples, pears, peaches. Adapted to all crops. Wire and wood fences in excellent condition. House of 7 rooms, hall and attic, in excellent condition. Main barn, 35x40; wagon house, 24x36; hay house, 20x34. House and barns watered by well and cistern; fields by springs. Farm occupied by owner. Reason for selling, ill health. Price, $5,500. Terms, half cash, balance mortgage at 5%. Address Benjamin Cotting, Red Hook, N. Y.

No. 209.— Farm of 250 acres; located 2½ miles from Red Hook postoffice; 5½ miles from railway station at Barrytown, on line of N. Y. C. R. R.; 2½ miles from school, churches and milk station. Excellent highways. Nearest village, Red Hook, population 923, distant 2½ miles, reached by highway. General surface of farm, rolling. Nature of soil, sand and loam. Acres that can be used as meadow, 200; number now so used, 60; in natural pasture, 30; in timber, 40, oak and chestnut. Acres tillable, 200. Fruit, 1,300 apple trees. Adapted to all crops. Wood and wire fences in excellent condition. House, 32x44, ell, 24x30, cellar under all, excellent condition. Three barns: 45x66; 24x68; 24x26. House and barns watered by wells and cisterns; field by streams and springs. Farm occupied by owner. Reason for selling, old age. Price, $20,000. Address Philip Stickle, Red Hook, N. Y.

TOWN OF RHINEBECK

Population 3,485

No. 210.— Farm of 125 acres; located 2 miles from Rhinebeck P. O., R. D. No. 49, and railway station on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches. Highways, state road. General surface, hilly, rolling and level. Altitude, 600 feet. Nature of soil, loam and muck. Acres that can be used as meadow, 100; in timber, 10, maple, chestnut, oak and hemlock. Acres tillable, 100. Fruit, 100 Baldwins, 80 Newtons, 15 Northern Spies, 30 other varieties of apples; 20 cherry, 80 pear trees, small fruit. Adapted to grain and hay. Fences, stone wall with top rail, good condition. House, 10 rooms, with modern improvements. Outbuildings: barn 40x40; carriage house and stables 30x40; cattle barn 30x75, with concrete floor; poultry house; granary and hog house. All painted and in good condition. House and barn watered by city water; fields, by springs and stream. Occupied by caretaker, possession given at any time. Reason for selling, owner in other business. Price, $20,000. Terms, one-half cash, balance on mortgage at 6%. Free unlimited water rights belong to place. Address, S. W. Vanderbeck, owner, Manhasset, Nassau Co., L. I., N. Y.

TOWN OF UNION VALE

Population 1,149

No. 211.— Farm of 158 acres; located 2 miles from Moores Mills P. O., R. D. 25; 2½ miles from Verbank railway station on line of Central New England R. R.; 2 miles from school; 1½ miles from churches; 2½ miles from milk station. Highways, hilly. Nearest city, Poughkeepsie, population 32,714, 12½ miles distant. General surface, level and rolling. Acres in meadow, 75; in pasture, 60; in timber, 10. Acres tillable, 100. Fruit, apples, cherries, etc., for family use. Best adapted to hay, corn and potatoes. Fences, wire and stone wall. House, 10 rooms, new. Large new barn, silo and ice house. House and barn watered by well and springs; fields, by springs. Reason for selling, in other business. Price, $9,000. Terms, ½ cash, balance on mortgage. Address James Mateer, owner, Verbank, N. Y. Will rent with option to buy.

No. 212.— Farm of 33 acres; located 1 mile from Moores Mills P. O. and railway station, on line of C. N. E. R. R.; 1 mile from school; ¾ mile from churches; 4 miles from cheese factory and 2½ miles from condensing plant. Highways, hilly, fair condition. Nearest city, Poughkeepsie, population 32,714, 12½ miles distant, reached by rail and highway. General surface of farm, rolling. Acres that can be used as meadow, 25; in natural pasture, 50. Acres tillable, 25. Fruit: apple, pear and cherry trees, some small fruit. Best adapted to corn, potatoes and oats. Fenses, stone wall and wire. House, small, good condition. Barn, fair size, fair condition. House watered by well; fields, by spring and creek. Occupied by tenant. Reason for selling, owner too far away to attend to same. Price, $2,000. Terms, $800 cash, balance on mortgage. Owner will rent for $90 per year. Address P. B. Collins, owner, Central Islip, Long Island, N. Y.

No. 213.— Farm of 204 acres; located 3 miles from Verbank postoffice, R. D. No. 25; 3 miles from railway station at Verbank, on line of Central New England R. R.; ¼ mile from school; 1 mile from church; 3 miles from milk station. Good highways. Nearest village, Millbrook, population 1,252, distant 5 miles, reached by highway. General surface of farm, level. Nature of soil, loam. Acres that can be used as meadow, 140; acres now used as meadow, 125; in natural pasture, 76; in timber, 3; number tillable, 175. Fruit trees, 40 apple, 6 pear, 4 plum. Adapted to corn, oats and hay. Wire fences in good condition. House, 12 rooms, good condition. Large barns in good condition. House and barns watered by wells; fields by springs. Now occupied by owner. Reason for selling, old age and physical disability. Price, $10,000. Terms, half cash. Address Peter Mathis, owner, Verbank, N. Y.

No. 214.— Farm of 167 acres; located ¾ mile from Verbank postoffice, R. D. No. 25; three-fourths of a mile from railway station at Verbank, on line of Central New England R. R.; 1 mile from school; ¾ mile from church: 5 miles from cheese factory; ¾ mile from milk station. Highways, hilly but good. Nearest village, Millbrook, population 1,252, distant 5 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 800 feet. Nature of soil, silt loam, good. Acres that can be used as meadow, 80; number now so used, 50; in natural pasture, 60; in timber, 32, mixed, mostly chestnut.

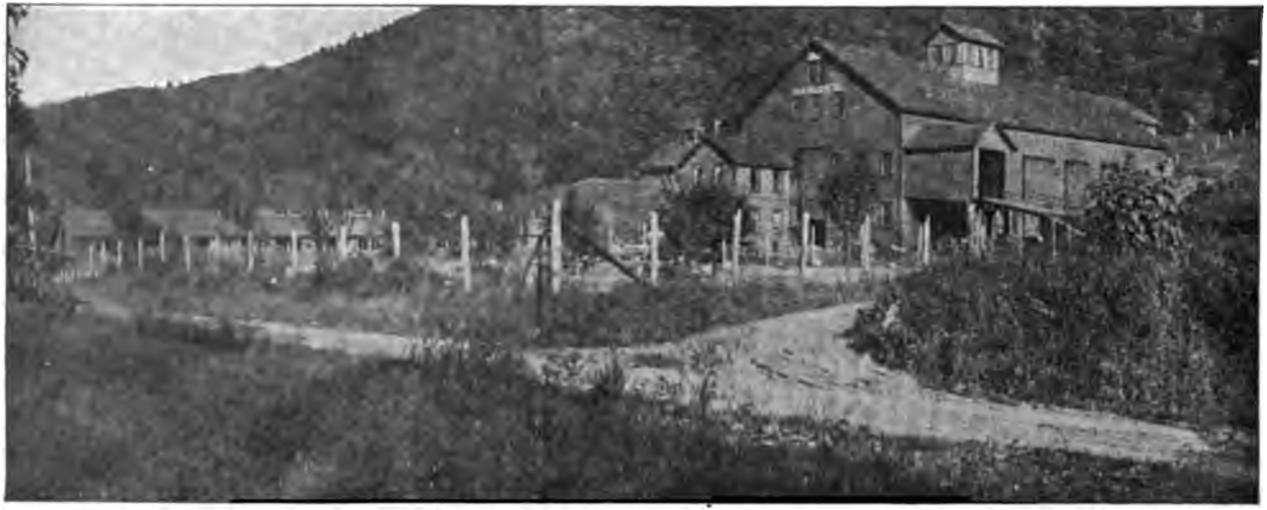


FIG. 28.— VIEW ON FARM NO. 198, TOWN OF WALTON, DELAWARE COUNTY.

Acres tillable, 130. Fruit trees, 200 bearing apple, 12 pear, 6 cherry, 10 plum, 2 quince, 6 grape, 10 peach, currants and raspberries. Adapted to corn, oats, rye, wheat, potatoes, hay, buckwheat. Stone wall and rail fences in fair condition. Good house of 11 rooms. Main barn, 30x50; cow barn, 22x28; wagon house, 30x30, with basement and horse stable; hen house. House watered by well and cistern; barns by ¾-inch lead pipe; fields by springs and brook. Hudson river 14 miles distant. Now occupied by owner. Reason for selling, farm larger than owner wants. Price, $9,000. Terms, $5,000 on delivery of deed, $4,000 could remain at 6%. Farm has first class sand and gravel bank. Address Willard H. Tompkins, owner, Verbank, N. Y.

ERIE COUNTY

Area, 1,171 square miles. Population, 571,897. Annual precipitation, 33.51 inches. Annual mean temperature, 49.7°. Number of farms, 8,178. County seat, Buffalo.

This county lies at the west end of the state on Lake Erie and Niagara river and is one of the larger counties both in area and population.

Its surface is level in the north, rolling in the center and hilly in the south. A region of level country of considerable extent lies along the Tonawanda creek and occupies the greater part of the northern tier of towns. The soil of the northern part of the county is generally a clay loam interspersed with beds of marl and muck; farther south is found a clay gravelly loam resting upon limestone, and the southern hills are covered with drift consisting of clay and gravel. The soil of the valleys is generally of gravelly loam and alluvium. The principal pursuits are grain raising and dairying, the southern hill regions being well adapted to grazing and stock raising. It is also a strong fruit county and ranks high in orchard and vineyard production. Buffalo, a city of 454,630 population, affords an unlimited market close at hand. From this city, the western terminal of the barge canal, which reaches from the Hudson river to Lake Erie, an enormous commercial business is carried on by way of the lake to the towns along its shore.

The principal crops are as follows: corn, shelled, 298,320 bushels; oats, 1,321,243 bushels; wheat, 420,447 bushels; buckwheat, 130,892 bushels; potatoes, 906,468 bushels; hay and forage, 146,791 tons. The value of all farm property in 1910 was $63,808,399, an increase of 23.7 per cent in 10 years. The average price per acre of farm land, including buildings, is $95.40. Much of the land is of high valuation because of its adaptability to truck gardening, and the splendid orchards of apples, pears, peaches, plums, etc. Aside from these products there were produced 24,470,712 gallons of milk, the receipts from the sale of dairy products being $2,323,714. There are 259 district schools and these schools and the many high schools of the county are all up to the high standard required by the state. Churches of all denominations are scattered throughout the rural sections. The county has nineteen agricultural organizations for the purpose of conserving some one or more interests in agriculture. Thirty-six dairy stations and factories meet the demand of the farmers for milk market. There are 163 miles of state and county roads and 1,680 miles of other improved highways in the county.

TOWN OF AURORA

Population 5,446

No. 215.— Farm of 100 acres; located 2 miles from East Aurora P. O. and railway station, on line of Pennsylvania R. R.; ¾ mile from school; 1½ miles from churches; 2 miles from butter factory and milk station. Highways, state road. Nearest city, Buffalo, population 454,630, reached by rail and highway. General surface, slightly rolling. Altitude, 900 feet. Nature of soil, clay subsoil. Acres that can be used as meadow, 95; in natural pasture, 20; in timber, 3; acres tillable, 95. Fruit, 4 acres of apple orchard, 200 trees; a few each of pear, cherry, plum and small fruit for family use. Best adapted to corn, oats, potatoes and hay. Fences, wire, good condition. House, good, frame, 10 rooms, 20x24, wing, 16x24. Outbuildings: barn, 30x51, ell, 20x65; horse barn, 27x44; poultry, hog, wagon and tool house; granary and 2 silos, 12x28. House and barns watered by wells and springs; fields, by springs. Occupied by owner. Reason for selling, wish to retire. Price, $10,000. Terms, ½ cash, balance on mortgage. Address Charles S. Addington, owner, East Aurora, N. Y., R. D.

No. 216.— Farm of 144 acres; located 2½ miles from East Aurora, on line of Pa. R. R; ¼ mile from school; 2½ miles from churches, butter factory and milk station; 2 miles from cheese factory and 5 miles from condensing plant. Highways, good. Nearest large village, East Aurora, population 3,445, 2½ miles distant, reached by highway. General surface, rolling. Nature of soil, gravel and black loam. Acres that can be used as meadow, 110; in natural pasture, 25; in timber, 6, maple, hemlock, ash, beech and iron wood. Acres tillable, 120. Fruit, 275 apple and 50 pear trees. Adapted to corn, potatoes, oats, buckwheat, beans and alfalfa. Fences, barbed wire, in good condition. House, 14 rooms, modern. Large basement barn with running water and other smaller buildings. Watered, house, barn and fields by springs. Occupied by owner. Reason for selling, other business. Price, $22,000. Terms, ½ cash and remainder on mortgage. Address George H. Sweet, East Aurora, N. Y.

TOWN OF ELMA

Population 2,282

No. 217.— Farm of 87 acres; located 2¼ miles from East Aurora P. O. and railway station, on line of Pennsylvania railway; ¾ mile from school; 2 miles from churches; 2½ miles from butter factory. Nature of highways, level, chiefly state road. Nearest city, Buffalo, population 454,630, distant 10 miles, reached by rail and highway. General surface of farm, level. Altitude, 900 feet. Nature of soil, loam. Acres that can be used as meadow, 70; in natural pasture, 7; in timber, 10. Fruit, apples and pears. Adapted to corn, hay, grain and potatoes. Fences, barbed wire and rail. House, frame, 1¾ stories, 3 verandas, cellar. Outbuildings: barn, 100x40, hog house, wagon shed, tenant house in good condition. Watered, house, by 4 good wells; barns by wells; and fields, by springs and brook. Occupied by owner. Reason for selling, advanced age. Price, $150 per acre. Terms, ⅓ down, balance on mortgage at 5%. Address B. J. Cole, owner, R. F. D., East Aurora, N. Y.

TOWN OF HAMBURGH

Population 7,374

No. 218.— Farm of 8 acres; located 6 miles from Buffalo; 1½ miles from Orchard Park, on line of B. R. & P. R. R.; 1½ miles from school and churches. Highways, good. Nearest city, Buffalo, population 454,630, 6 miles distant, reached by trolley, rail and highway. General surface, rolling. Nature of soil, sandy loam. Fruit, 75 apple, 100 peach, 65 pear and 10 cherry trees. Best adapted to garden truck. Fences, wire, in good condition. House, 8 rooms. Outbuildings: barn, 8 chicken coops and 3 incubators, all new. Watered, house by well and cistern. Occupied by owner. Reason for selling, death in family. Price, $7,000. Terms, part cash and remainder on mortgage. Address Gertrude McGill, Buffalo, N. Y., General Delivery.

TOWN OF MARILLA

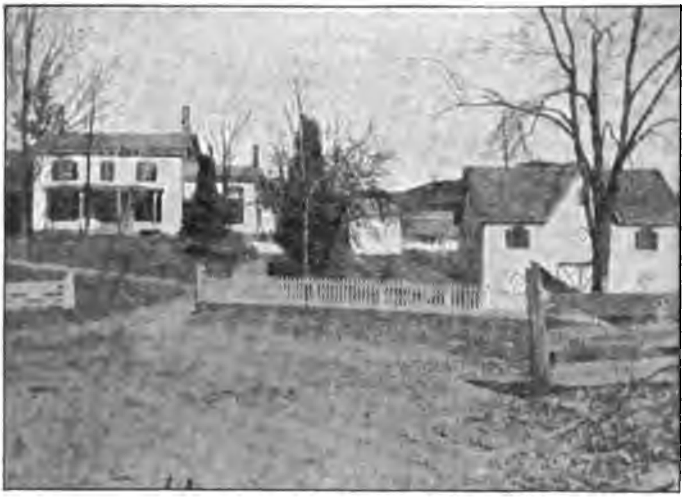
Population 1,409

No. 219.— Farm of 71 acres; located 1 mile from Marilla P. O. and 4½ miles from railway station, on line of Erie R. R.; 1 mile from school, churches, butter factory and milk station; 2 miles from cheese factory. Highways, good. Nearest city, Buffalo, population 454,630, 14 miles distant. General surface, rolling. Altitude, 800 feet. Nature of soil, gravelly. Acres that can be used as meadow, 55; in natural pasture, 18; in woodland, 8. Acres tillable, 55. Fruit: apple, peach, plum and cherry trees, all kinds of berries for family use. Adapted to potatoes, corn, beans and grain. Fences, wire and rail. Two frame houses, 18x24, with wings, 16x24 and 14x20; 16x24, with 2 wings 14x20; each of 9 rooms, verandas, cellars. Barns, 26x36, 24x26; 1 with basement; shed, granary, poultry house. Watered, house and barn by well; fields by springs. Occupied by tenant. Price, $6,000. Terms, $2,000 cash, balance on mortgage. Address G. H. Foster, owner, Marilla, N. Y.

TOWN OF WALES

Population 1,197

No. 220.— Farm of 60 acres; located 4 miles from South Wales P. O. and 5 miles from railway station at East Aurora, on line of Pennsylvania R. R.; ½ mile from school; 2 miles from churches; 3 miles from butter factory, and ¼ mile from milk station. Highways, good. Nearest city, Buffalo, population 454,630, reached by rail or highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, yellow loam. Acres that can be used as meadow, 39; in natural pasture, 8; 13 acres woodland. Acres tillable, 47. Fruit: apples, pears, plums, peaches, grapes and currants. Adapted to potatoes, grain and hay. Fences, wire, in good condition. House, frame, 2 stories, 10 rooms; main 18x24,



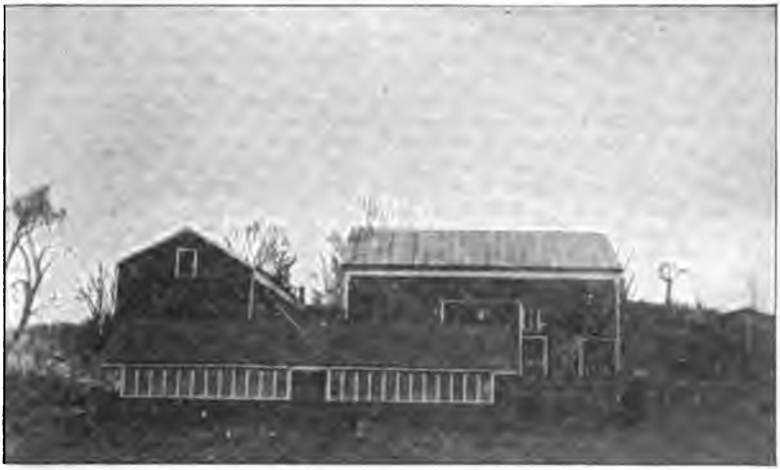


FIG. 29.— BUILDINGS ON FARM NO. 201, TOWN OF HYDE PARK, DUTCHESS COUNTY.

wings, 14x22 and 12x24; veranda, half cemented cellar. Barn, new 34x54 with basement, wagon shed, poultry and hog house in one; silo, round, 12x24. Watered, house, by well; barns, by springs. Occupied by owner. Reason for selling, have larger farm. Price, $4,200. Terms, ½ cash, balance on mortgage at 5 per cent. Address Will G. Heineman, owner, Wales, R. F. D., N. Y.

No. 221.— Farm of 212 acres; located 2½ miles from postoffice at South Wales; 1½ miles from railway station at Blakeley's Crossing, on line of Penn. R. R.; school on farm; 2½ miles from churches, butter and cheese factories; 1½ miles from milk station; 3 miles from condensing plant. Good highways. Nearest village, East Aurora, population 3,445, distant 4 miles, reached by rail and highway. Surface of farm slopes to east, with good drainage. Nature of soil, good loam. Acres that can be used as meadow, 100; number now so used, 40; in natural pasture, 60; in timber, 40, elm, maple and cherry. Acres tillable, 100. Fruit: 150 apple, 25 pear, 5 plum trees. Best adapted to grass, potatoes, oats and corn. Fences, woven and barbed wire, condition fair. Large house suitable for two families; good condition. Barn, 32x60, gambrel roof; granary, 18x30; hen house, 24x14; tool house, 20x30; silo, 14x26, fairly good. House watered by well at door; running water in barns; fields watered by spring water and brook. Farm now occupied by tenant. Reason for selling, old age. Price, $50 per acre. Terms, ¼ down and balance to suit purchaser. This is one of the best dairy farms in the section. Address Mr. Volney A. Hudson, Oakwood Ave., East Aurora, N. Y.

ESSEX COUNTY

Area, 1,926 square miles. Population, 32,461. Annual precipitation, 35.41 inches. Annual mean temperature, 46.8°. Number of farms, 2,274. County seat, Elizabethtown.

This county is located in the northeastern part of the state.

It is by far the most broken and mountainous section of the state, with the exception of a strip of land lying along the shore of Lake Champlain. Nearly the whole county is of an Alpine character. Among these mountains are immense beds of magnetic iron ore. Other minerals interesting to science are found in abundance. Lake Champlain and Lake George lie partly in the county. These lakes with the Champlain canal, the Hudson, Saranac and Raquette rivers form a convenient outlet for the large amount of logs, lumber and mineral products of the county. There is also an outlet for everything marketable on the north by the way of the Richelieu and St. Lawrence rivers.

Only about one-third of the area of the county is in farms and only about one-eighth improved farms, yet there is a remarkably good report of agricultural production, showing that the tillable land must be very productive. The average price of improved farm lands, including buildings, is $24.71 per acre. The leading crops of the county are: corn, shelled, 67,127 bushels; oats, 268,318 bushels; barley, 10,210 bushels; buckwheat, 20,116 bushels; potatoes, 214,081 bushels; hay and forage, 44,267 tons. The number of domestic animals reported on 2,139 farms are: dairy cows, 49,680; horses, 6,292; swine, 4,820; sheep, 12,164; poultry, 86,067. The production of milk was 4,976,712 gallons; the total receipts for the sale of dairy products, $303,933. There are 164 district schools and the same favorable condition exists in regard to churches of all denominations. There are 14 agricultural organizations in the county all interested in the promotion of agricultural matters. The county has 100 miles of state and county roads and 1,069 miles of other improved highways. A smaller percentage of the farms of Essex county are mortgaged than in any other county of the state.

TOWN OF LEWIS

Population 844

No. 222.—Farm of 137½ acres; located 1¼ miles from Wadhams, on line of D. & H. R. R.; 1 mile from school; 1¼ miles from churches, and 5 miles from butter factory. Highways, good. Nearest city, Plattsburg, population 10,134, 37 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay and loam. Acres used as meadow, 90; in natural pasture, 47½; in timber, 5, elm and other trees. Fruit: apples, pears, plums and currants.

Best adapted to oats, corn and potatoes. Fences, mostly woven wire, in good condition. House, 9 rooms, brick. Outbuildings: barn 30x40, barn 30x50, horse barn, granary, poultry house and ice house. Watered, house and barn, by running spring; fields, by brook. Occupied by tenant. Reason for selling, ill health. Price, $5,000. Terms, easy. Address Mrs. Hattie E. Robb, Wadhams, N. Y.

No. 223.— Farm of 250 acres; located 3½ miles from Elizabethtown; 11½ miles from Westport, on line of D. & H. R. R.; ½ mile from school; 3½ miles from churches, and 11½ miles from butter factory and milk station. Highways, good. Nearest village, Elizabethtown, population 530, 3½ miles distant, reached by highway. General surface, medium. Nature of soil, loam. Acres that can be used as meadow, 75; in natural pasture, 190; in timber, about 100, pine, oak, maple and hemlock. Acres tillable, 40. Fruit: apple, pear and plum trees. Best adapted to corn, potatoes and oats. Fences, wire and rail, in good condition. House, 11 rooms, new. Outbuildings: 2 barns 24x30; 1 barn 26x30, and 1 barn 30x40. Watered, house, by two wells; barns and fields, by springs. Occupied by owner. Reason for selling, other business. Price, $1,800. Terms, cash. Address Charles McMurtry, Elizabethtown, N. Y.

TOWN OF MORIAH

Population 6,007

No. 224.— Farm of 260 acres; located 2¼ miles from Moriah P. O.; 4¾ miles from railway station at Port Henry, on line of D. & H. R. R.; 1¼ miles from school; 2¼ miles from churches. Highways, good country roads, somewhat hilly. Nearest village, Port Henry, population 2,584, 4¾ miles distant, reached by highway. General surface, hilly. Altitude, 1,100 feet. Nature of soil, loam. Acres that can be used as meadow, 150; now used as meadow, 65; in natural pasture, 100; in timber, 70, maple, beech, birch, spruce, cedar, etc. Acres tillable, 150. Fruit: 50 apple, 4 pear and 2 cherry trees. Adapted to hay, oats, corn, potatoes, etc. Fences, woven wire, stone wall and rail. Large house, good condition. Outbuildings: 2 large barns, with basement, hog house, ice house and silo. Watered, house, by spring; barns, same. Occupied by tenant. Reason for selling, old age. Price, $6,000. Terms, $2,500 cash, balance on mortgage. Price includes stock and machinery and ½ of all crops on hand. Address G. S. Kidder, owner, Port Henry, N. Y.

FRANKLIN COUNTY

Area, 1,718 square miles. Population, 46,181. Annual precipitation, 37.16 inches. Annual mean temperature, 43.3°. Number of farms, 3,675. County seat, Malone.

This county ranks fourth in land area, and is situated on the north line of the state bordering on Canada.

Its surface is mostly level in the northern part, undulating and rolling in the center, and broken and mountainous in the eastern portion. There are many streams in the northern part of the county affording abundance of water for the farming section and in the southern and mountainous portion of the county is a large number of lakes, some of them several miles in extent. Dairying is carried on to a large extent in the northern part. There is a large amount of timber in the central and southern portions. The farm valuation in 1910 was placed at $17,571,227, a gain of 37.5 per cent. over that of 1900. The average price per acre of improved farm land, including buildings, is $32.50. The principal crops raised are: corn, shelled, 59,334 bushels; oats, 908,910 bushels; wheat, 21,568 bushels; barley, 54,883 bushels; potatoes, 786,329 bushels; hay and forage, 88,255 tons. The county ranks high in the production of barley and potatoes. The number of domestic animals reported are as follows: dairy cows, 25,280; horses, 8,395; swine, 8,749; sheep, 3,245; poultry, 114,915; milk production, 12,715,196 gallons and total receipts from dairy products, $1,135,644. There are 99 district schools, many churches of all denominations, and 14 agricultural organizations, one dairymen's association, one agricultural society and one county fair association. This county has 40 dairy stations and factories. The hardier kinds of apples are grown in abundance and the fruits are easily cultivated. There are ample facilities for marketing. The St. Regis Indians have a reservation of 24,000 acres in the northwest corner of the county.

TOWN OF BANGOR

Population 2,179

No. 225.— Farm of 48½ acres; located 2½ miles from West Bangor P. O., R. D. No. 2; 7 miles from railway station at North Bangor, on line of Rutland R. R.; 1½ miles from school; 2½ miles from churches and 6 miles from condensing plant. Highways, good. Nearest village, Malone, population 7,404, 10 miles distant, reached by highway. General surface, level. Nature of soil, heavy. Acres that can be used as meadow, 25; in natural pasture, 23. Acres tillable, 20. Fruit, 20 apple trees. Adapted to grain, corn, hay and potatoes. Fences, mostly woven wire. House, 22x52, with wood shed attached. Outbuildings: barn, 90x36 also silo. House watered by well; barns, by well; fields, by spring. Reason for selling, other business. Price, $2,600. Terms, $500 cash, balance on mortgage; easy. Good poultry house 20x50, concrete floor and large yard. Address Mrs. Lizzie Hutchins, owner, North Bangor, N. Y.

TOWN OF BRANDON

Population 860

No. 226.— Farm of 53 acres; located 1½ miles from Skerry P. O., R. D. 4; 7 miles from railway station at Bangor, on line of Rutland Ry.; 1 mile from school and church; 1½ miles from butter factory and milk station; 4½ miles from cheese factory; 6½ miles from milk condensing plant. Highways, in good condition. Nearest large village, Malone, population 7,404, 9 miles distant, reached by highway. Soil, loam. Acres that can be used as meadow, 28; in natural pasture, 30; in timber, 5. Acres tillable, 18. Eighteen apple trees. Best adapted to corn, potatoes and hay. Fences, wire, good condition. House, 16x24, ell, 12x16, ell, 16x16, good condition. Outbuildings: barn 24x26, with lean-to, 16x24; poultry house, 12x25, new. Watered, house and barn, by well; fields, by Little Salmon river. Occupied by owner. Price, $1,500. Terms, one-half down, balance on time. Address Jas. Whitcomb, owner, North Bangor, N. Y., R. D. 4.

TOWN OF MOIRA

Population 2,413

No. 227.— Farm of 700 acres; located ⅛ mile from Moira P. O.; ¾ mile from railway station at Moira, on line of Rutland R. R.; ⅛ mile from school, churches and milk station; 2 miles from butter factory. Highways, new state road. Surface of farm, ½ rolling, ½ river bottom flats, overflowed annually. Altitude, about 600 feet. Soil, good, lime uplands, clay river bottom. Acres in timber, 60. Acres tillable, 350. Adapted to any crops grown in this climate. Fences, good. Large house, good condition. Outbuildings, large and in good condition. Watered by well and brook. A costly stone residence in the village would be sold with or without the farm and two together would make a fine country seat and fancy stock farm for wealthy gentleman. Occupied by tenant. Reason for selling, ill health. Price, $35,000. Terms, $15,000 down, balance on easy payments. Price includes 70 head of cattle, but not stone residence in village. Address Wm. S. Lawrence, owner, Moira, N. Y.

FULTON COUNTY

Area, 544 square miles. Population, 45,625. Annual precipitation, 50.62 inches. Annual mean temperature, 46.1°. Number of farms, 1,932. County seat, Johnstown. Located north of the Mohawk river, 45 miles west of Albany.

Its surface is a rolling and hilly upland in the southern portion, rising into a mountainous region in the north. In this part of the county are a large number of lakes forming a characteristic feature of the entire wilderness region of northern New York. The soil in the southern part and along the valleys is mostly a gravelly clay loam and is well adapted to pasturage and dairying, and in the more favorable localities produces excellent crops of grain. Manufacturing is carried on to a large extent, especially in gloves and mittens. More of these commodities are manufactured in Gloversville, Johnstown and the vicinity than are made in all the remainder of the United States. In the northern portion of the county are large tracts of fine timber owned chiefly by the state, though, as in other mountainous counties, private parties have holdings. There are ample facilities for marketing all manufactured and agricultural products. The total valuation of farm property is $6,808,265. The average price of farm lands per acre including buildings is $25.30.

These figures show a slight increase in value over that given in 1900. The principal crops are corn, 121,209 bushels; oats, 218,517 bushels; buckwheat, 44,879 bushels; potatoes, 271,868 bushels; hay and forage, 50,479 tons. The number of farms reporting domestic animals is 1,741; dairy cows, 9,835; horses, 4,064; swine, 4,344; poultry, 67,193; milk produced, 4,533,935 gallons. Receipts from the sale of dairy products, $383,131. There are nine milk stations and factories in the county. In the lower portion considerable quantities of apples and small fruits are raised. There are 99 district schools and five agricultural organizations. In the larger villages are high schools and academies. The county is noted for its salubrious climate and is the location to which a large summer population go. Sacandaga Park located on the river bearing its name is a noted summer resort.

TOWN OF BROADALBIN

Population 1,845

No. 228.— Farm of 116 acres; ½ mile from Union Mills P. O.; 3 miles from Broadalbin, on line of F. J. & G. Ry.; ½ mile from school and churches; 3 miles from butter and cheese factory. Soil, sandy loam, adapted to general farming. Acres that can be used as meadow, 50. Acres tillable, 70. Watered by good springs. Reason for selling, old age. Price, $600. Address David Blair, owner, Broadalbin, N. Y. Will rent.

No. 229.— Farm of 40 acres; located ¾ mile from Broadalbin P. O., R. D. 1; ½ mile from railway station at Broadalbin, on line of F. J. & G. R. R.; 1 mile from school; ¾ mile from churches; 1 mile from cheese factory. Highway, good, level. General surface, level. Acres in meadow, 20; in timber, 20, butternut and hardwoods. Acres tillable, all. Adapted to general farm crops. Fences, wire, good. House, large, 2 stories, needs painting. Outbuildings: 3 large barns, poultry house, hog house and corn house, nearly new. House and barns watered by two good wells, fields by creek. Occupied by owner. Reason for selling, ill health. Price, $3,000. Terms, $2,000 cash, balance easy. Will include 8 acres of timber land at same price, if desired. Address Marvin W. Clifford, owner, Broadalbin, N. Y., R. D. No. 1, box 105.

No. 230.— Farm of 125 acres; located 1 mile from Benedict P. O.; 6 miles from railway station at Broadalbin, on line of F. J. & G. R. R.; 1 mile from school; 2 miles from churches; 6 miles from butter factory and milk station. Highways, good country roads, not very hilly. General surface of farm, level. Altitude, 800 feet. Nature of soil, dark rich loam. Acres that can be used as meadow, 75; in natural pasture, 25; in timber, 25, oak, birch, butternut and elm. Acres tillable, 75. Best adapted to potatoes, corn, buckwheat and oats. Fences, wire, good condition. House, good farm house, 1½ stories, 10 rooms, good cellar. Outbuildings: fair barn, poultry house, shed, etc. Watered, house, by well. Occupied by owner. Reason for selling, ill health. Price, $2,250. Terms, reasonable. Address Anna M. Orton, owner, Northampton, N. Y. Will rent with option to buy.

TOWN OF NORTHAMPTON

Population 2,231

No. 231.— Farm of 70 acres; 1½ miles from P. O. at Northville, on line of F. J. & G. Ry.; ½ mile from school and churches. Good sandy loam soil. Ten acres timber; balance meadow and pasture. Acres tillable, 50. Fences, mostly wire. Young apple trees in bearing and small fruits, also some plums, cherries and pears. House, 36x26, with large wing; piazza on front and one end; all in fairly good condition; well shaded by maples. Barns, 35x45 and 26x36. Water at house and barn. This farm would make an ideal summer boarding house or summer home. Occupied by owner. Reason for selling, ill health. Price, $1,800. Terms, $1,000 cash, balance on mortgage. Name and address of owner, M. B. Merrill, Northville N. Y.

No. 232.— Farm of 375 acres; located ¼ mile from Cranberry Creek P. O.; 5 minutes' walk from railway station, on line of F. J. & G. R. R.; ¼ mile from school and churches. Highways, good. Nearest city, Gloversville, population 21,178, 10 miles distant, reached by rail and state road. General surface of farm, level. Altitude, 700 feet. Soil, loam. Acres that can be used as meadow, 100; in natural pasture, 75; in timber, 200, soft wood, poplar, beech and birch. Acres tillable, 175. Best adapted to hay, grain and potatoes. Fences, wire, good condition. Ten-room house, in fair condition. Outbuildings: 4 barns, 70x40, 51x37, 40x30 and 34x18, fair condition, with good basements. House lighted by electricity. House, watered by well and cistern, barns by large spring in basement, and fields by creeks. Foothills of Adirondacks, 1 mile distant. Occupied by tenant. Reason for selling, to settle estate. Price, $6,000. Terms, $2,500 cash, balance on mortgage. Address Mary A. Gilbert, owner, Mayfield, N. Y.

TOWN OF OPPENHEIM

Population 1,161

No. 233.— Farm of 200 acres; located 3 miles from Dolgeville P. O., R. D. No. 1, and railway station, on line of Little Falls & Dolgeville R. R.; ¼ mile from school; 1 mile from church and cheese factory; 3 miles from butter factory and milk station, and 6 miles from condensing plant. General surface of farm, rolling. Altitude, 1,075 feet. Soil, loam. Acres that can be used as meadow, 120; in natural pasture, 60; in timber, 50, hard and soft. Acres tillable, 120. Fruit, 50 apple trees, some strawberries. Adapted to corn, wheat, oats and potatoes. Fences, wire, all in good condition. House, 40x30, good condition, newly painted. Outbuildings: main barn with basement, 40x50; wagon house, 12x30; and new wood shed; wagon house, 30x40. House watered by well and cistern, barns by well, and fields by springs and creek. Occupied by owner. Reason for selling, other business. Price, $2,500. Terms, $500 cash, balance on mortgage. Address John A. Cross, owner, Dolgeville, N. Y.

GENESEE COUNTY

Area, 507 square miles. Population, 40,707. Annual precipitation, 34 inches. Annual mean temperature, 50°. Number of farms, 3,250. County seat, Batavia. Located in the upper western part of the state.

The surface is mostly level or gently rolling and undulating. The southern part is occupied by ranges of hills, which have an elevation of 200 or 300 feet above the valley. A limestone terrace extends east and west through the county and building stone is extensively obtained from its outcropping ledges. The surface is generally covered with a thick drift deposit and the underlying rocks only appear in the ravines of the streams. Nearly all the swamps contain thick deposits of muck and marl, furnishing in abundance the element for future fertility. The soil of the county is generally a very deep and fertile sandy or gravelly loam, intermixed with clay. This county embraces a portion of the celebrated "Genesee Country," which from the first settlement has been famed for its fertility. For many years wheat formed the staple product, but since the opening of the wheat lands of the west this product has gradually given away to a more profitable production of fruit and dairying. The county is well watered and its products find ready sale in the enormous markets that are within short shipping distances over railroads and trolley lines that traverse the county in every direction. The value of farm land including buildings is $25,044,508. The average price per acre of farm property is $71.43; almost doubling its value in ten years. The principal crops are: corn, shelled, 200,102 bushels; oats, 515,396 bushels; wheat, 637,279 bushels; barley, 74,231 bushels; dry beans, 311,831 bushels; rye, 30,285 bushels; potatoes, 463,040 bushels; hay and forage, 69,333 tons. There are 3,052 farms reporting domestic animals, dairy cows, 11,830; horses, 10,166; swine, 11,301; sheep, 29,646; poultry, 149,635; milk from dairies, 6,897,768 gallons, and the total receipts from the sale of dairy products, $592,060. There are 124 district schools, graded schools, academies and union schools located in many of the towns. There are 15 agricultural organizations whose purpose is to conserve the interests of the farmer. Land values in this county are increasing very rapidly.

TOWN OF ALEXANDER

Population 1,403

No. 234.— Farm of 120 acres, located 2 miles from Alexander P. O., R. D. No. 1; 1¾ miles from railway station at Linden, on line of Erie R. R. Milk collected at door. One mile from school; 1¾ miles from milk station and milk condensing plant; 2 miles from cheese factory and churches. Highways, in good condition. This farm is 8 miles from Batavia, population 13,278, reached by rail and highway. Surface of farm, part rolling, balance level. Soil, loam, gravel, black, slate, etc. Acres in meadow, 36; in natural pasture, 30; in timber, 3, maple, good. All tillable except 10 acres. Fruit, about 6 acres of apple orchard; large quantity of fruit for family use, such as pears, plums, cherries, berries, etc. Adapted to general farming. Fences, wire, good condition. House, 13 rooms, good, except wood house needs slight repairs. Outbuildings: 1 gambrel roof barn, 1 horse barn, granary, tool sheds, etc., all in fair condition. Watered by well, cistern, springs and brooks. Occupied by owner. Reason for selling, ill health of owner. Price, $9,500. Terms, cash. Will include 2 horses, 4 cows and crops in storage. Address John Triftshauser, Alexander, N. Y.

TOWN OF BETHANY

Population 1,394

No. 235.— Farm of 180 acres; located 3 miles from Linden P. O., R. D. No. 22, and railway station, on line of Erie R. R.; 40 rods from school and church; 6 miles from butter factory; 5 miles from cheese factory and 3 miles from milk station. Highways, good. Nearest city, Batavia, population 13,278, 7½ miles distant, reached by highway. General surface of farm, mostly rolling, some hilly. Altitude, 700 feet. Nature of soil, clay loam. Acres that can be used as meadow, 92; in natural pasture, 34; in timber, 3, hard wood, fair. Acres tillable, 92. Fruit, 55 acres of apples and 5 acres of Bartlett pears. Adapted to fruit, grain, beans, alfalfa and potatoes. Fences, wire, good. House, 10 rooms, fair condition. Outbuildings: horse barn, good, room for 14 horses; sheep barn, room for 1,500 sheep; tool shed, pig house and poultry house, in fair condition. Watered, house, by well and pump station; barns, pump station; and fields by springs and creek. Occupied by owner's son. Reason for selling, death of owner. Price, $150 per acre. Terms, ½ cash, balance mortgage at reasonable rate of interest. Address W. A. Page, Linden, N. Y.

TOWN OF DARIEN

Population 2,013.

No. 236.— Farm of 130 acres; located ¾ mile from Darien Center P. O.; 1¼ miles from railway station on line of Erie R. R.; ¾ mile from school and churches, and 1¼ miles from milk station. Highways, state road. Nearest city Batavia, population 13,278, 16 miles distant, reached by rail or highway. General surface of farm a little rolling. Nature of soil, loam, clay subsoil. Acres that can be used as meadow, 110; in natural pasture, 20; in timber, 6, sugar maple, beech and basswood. Acres tillable, 110. Fruit, 2 acres of apple orchard. Adapted to corn, wheat, potatoes, beans and alfalfa. Fences, wire, good condition. House, 10 rooms, modern gothic, good condition. Outbuildings: new barn 36x62, with gambrel roof, concrete floor, 20 swing stanchions, water in barn, built in 1912; large new silo, new barn 26x36, barn 26x40. House watered by well, barns by well, and fields by spring. Occupied by tenant. Price, $9,000. Terms, $2,000 cash, balance on mortgage. Address F. J. Corp, owner, Batavia, N. Y.

No. 237.— Farm of 165 acres; located ¼ mile from Darien P. O., R. D. 14; ¾ mile from railway station at Darien Center, on line of Erie R. R.; ⅛ mile from school and churches; 7 miles from butter factory; 3 miles from cheese factory; ¾ mile from milk station. Highways in good condition. Nearest city, Batavia, 14 miles distant, population 13,278, reached by rail and highway. Surface of farm, slightly rolling. Soil, gravel loam. Acres that can be used as meadow, 125; in natural pasture, 15; in timber, 25, maple, fine sugar bush. Acres tillable, 125. Fruit, about 130 trees, apples, pears, cherries, plums, peaches and grapes. Adapted to alfalfa, corn, wheat, potatoes and cabbage. Fences, wire, in good condition. House, new, 12 rooms; also 6-room tenant house, good condition. Outbuildings: barn, 40x70; barn, 28x48; ice house, all in good condition. Watered, house by well, barns by hydraulic ram, fields by springs. Occupied by owner and tenant. Reason for selling, ill health of owner. Price, $20,000. Terms, $8,000 down, balance on mortgage. Fine fish pond on farm close to house. Address James C. Lathrop, owner, Darien Center, N. Y.

No. 238.— Farm of 118 acres; located 2 miles from P. O., R. D. No. 4, and railway station at Griswold, on line of Erie R. R.; 1½ miles from school and church; 3 miles from butter factory, and 2 miles from milk station. Highways, good. Nearest village, Attica, population 2,013, 3 miles distant.

A NEW YORK CERTIFIED MILK FARM.

reached by rail and highway. General surface of farm, mostly level, slightly rolling. Nature of soil, gravelly loam, clay subsoil. Fruit, 10 acres of apple trees. Best adapted to oats, corn and beans. Fences, wire, good condition. Ten-room brick house, fair condition. Main barn, 32x64, ell, 30 feet square, fair condition. Watered, house, by good well; barns, by well; and fields by good springs. Occupied by tenant. Reason for selling, old age. Price, $60 per acre. Terms, easy. Will sell adjoining 60 acres. Address James A. Pettibone, owner, Attica, N. Y., Box 300.

TOWN OF PEMBROKE

Population 2,473

No. 239.— Farm of 96 acres; located 1¼ miles from East Pembroke P. O. and 1 mile from railway station at West Batavia on N. Y. C. R. R.; 1¼ miles from high school, milk station and churches. Highway, state road and brick. Nearest city, Batavia, population 13,278, 6 miles distant. General surface, mostly level. Altitude, 875 feet. Nature of soil, gravel loam. Acres in meadow, 10; in natural pasture, 15; in timber, 10. Acres tillable, 60. Fruit, 2 acres of apple orchard, fall and winter, 2 pear and 2 plum trees, currants and berries. Best adapted to grain, beans and potatoes. Fences, wire in good condition. Two-story frame house, 10 rooms, good cellar and veranda. Outbuildings: barn 30x70, with basement; hen house, hog house and granary. House and barn watered by two wells. 26 miles from Lake Ontario. Occupied by owner. Reason for selling, want smaller farm. Price, $6,500. Terms, $3,700 cash, balance at 6 per cent. There are 5 acres of black muck on this farm. Address Stewart Warren, owner, East Pembroke, N. Y., R. D.

GREENE COUNTY

Area, 600 square miles. Population, 30,091. Annual precipitation, 42.7 inches. Annual mean temperature, 47.7°. Number of farms, 2,654. County seat, Catskill.

Located in the southeastern part of the state, bounded on the east by the Hudson river.

The surface is rugged and varied, with the picturesque scenery of the Catskill mountains. A large part of the county is covered with forests. The mountains of Greene county lie in four groups which slope from every side into fertile valleys. Clay loam with occasional deposits of gravel characterize the farming portion of the county. There are also soils of limestone formation. The county is traversed by the West Shore and the Kaaterskill, Stony Clove and Catskill railroads. During the summer months thousands of tourists and summer residents visit this wonderful region, giving the farmers a ready market for all their farm produce in their home towns. While not excelling in any particular crop the yield of the staples is very good: corn, shelled, 100,267 bushels; oats, 197,702 bushels; buckwheat, 55,885 bushels; rye, 51,851 bushels; potatoes, 82,425 bushels; hay and forage, 43,383 tons. The domestic animals are reported as follows: dairy cows, 13,068; horses, 5,320; swine, 6,949; sheep, 5,343; poultry, 152,506. Average value of farm land, $17.44 per acre and of improved land, $37.93 per acre. Amount of milk produced, 7,588,116 gallons and the total receipts from dairy products of the eight milk stations in the county, $711,998. There are 144 district schools in the county and an academy at Catskill; also seven agricultural organizations to promote the farmers' interest. The state has recently bought about 100,000 acres in order to preserve the natural beauty of this historic region.

TOWN OF ATHENS

Population 2,725

No. 240.— Farm of 64 acres; located 2 miles from Athens P. O., R. D. No. 1; ¼ mile from railway station at West Athens, on line of W. S. R. R.; ½ mile from school, and 2 miles from churches. Highways, good. Nearest city, Hudson, population 11,544, 2 miles distant, reached by highway. General surface of farm, slightly rolling. Nature of soil, mostly black loam. Acres in timber, 1, firewood. Acres tillable, 63. Fruit: 600 pear, 125 apple, 70 plum and 35 cherry trees, all bearing and all varieties. Adapted to all crops. Fences, fair. House, 8 rooms, good, some papering needed. Outbuildings: poultry house, 11x9; extra 2-story barn, 12x18; all buildings good; cow barn, 2 stories, 17x63; horse barn, 13x22; carriage house, 6x26; and pig house, 16x27, Watered, house, by well and cistern; barns, by well, and fields by 5 springs. Hudson river, 2 miles distant. Occupied by owner. Reason for selling, ill health. Price, $4,600. Terms, $1,200 cash, balance on mortgage at 5 per cent. Will only sell at above price before crops are put in. Address A. Livingston, owner, Athens, N. Y.

No. 241.— Farm of 65 acres; ¾ mile from railway station at West Athens, on line of W. S. R. R.; 1 mile from school, churches and milk station. Highways, good. General surface of farm, rolling. Nature of soil, loam, good. Acres that can be used as meadow, 57; natural pasture, 6. Fruit, 450 pear, 50 apple and 100 cherry trees. Best adapted to fruit, hay and grain. House, 12 rooms, in good condition. Outbuildings: 2 large barns, wagon house, pig pen and 3 poultry houses. Watered, house, by well and cistern; barns, by cistern, and fields by springs. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, $3,000 cash, balance on mortgage. Address Levi J. Perry, owner, Athens, N. Y., R. D. 1.

No. 242.— Farm of 102 acres; located 2 miles from Catskill P. O., R. D. No. 2, and 2¼ miles from railway station, on line of W. S. R. R.; ¼ mile from school and 2 miles from churches. Highways, 2 miles from state road, but have good roads kept by the town. General surface of farm, level. Nature of soil, flat land is black soil, the rolling, gravelly. Acres that can be used as meadow, 60; in natural pasture, 8; in timber, 8, hard wood. Acres tillable, 80. Fruit, 300 apple, 1,000 pear, and some cherry and peach trees. Best adapted to hay and grains. Fences, wire and stone. House, 14 rooms, good condition. One hundred-foot barn, convenient and roomy; all other necessary buildings in good shape. Watered, house, by well and cistern; barns, by cistern, and fields by natural springs. Hudson river about 2½ miles distant. Occupied by owner. Reason for selling, to settle an estate. Price, $8,000. Terms, cash or half payment, with good security for balance. Address Mrs. Annie Clow, owner Catskill, N. Y.

TOWN OF CAIRO

Population 1,367

No. 243.— Farm of 87 acres; located 2½ miles from Freehold P. O., R. D. No. 2; 2½ miles from railway station at Cairo, on line of C. M. R. R.; ½ mile from school; 2½ miles from churches. Highways, good, some hills. Nearest village, Cairo, 2½ miles distant, reached by highway. General surface of farm, rolling, some bottom land. Altitude, 800 feet. Nature of soil, sandy and clay loam. Acres that can be used as meadow, 40; in natural pasture, 15; in timber, 10, hemlock, pine, oak, cedar, hickory and chestnut. Acres tillable, 62. Fruit, 100 apple, 25 pear trees, grapes, cherries and other fruit. Adapted to corn, oats, rye, hay and potatoes. Fences, wire and stone. House, 25x40, 9 rooms, good condition. Outbuildings: barn 30x80, fair condition, good grain house, 14x20. Watered, house, by well and cistern; barns, pond and spring; fields by Catskill creek and spring. Occupied by owner. Reason for selling, to settle the estate. Price $40 per acre. Terms: one-half cash, balance on mortgage at 5 per cent. Address, E. Simpkins, administrator, Freehold, N. Y.

TOWN OF CATSKILL

Population 9,021

No. 244.— Farm of 100 acres; located 5½ miles from Catskill postoffice, R. D. No. 1; five miles from railway station at Catskill, on line of W. S. R. R.; ¼ mile from school; 5 miles from churches and milk station. Good highways. Nearest village, Catskill, population 5,371, distant 5½ miles, reached by highway. General surface of farm, rolling. Altitude, 100 feet. Good soil. Acres that can be used as meadow, 18; in natural pasture, 20; in timber, 5, hardwood. Acres tillable, 90. Fruit: 75 apple, 30 pear, plums, cherries and peaches. Adapted to corn, wheat, rye, oats, buckwheat, potatoes. Stone and wire fences in fair condition. Stone house, 28x42, frame kitchen, 16x22 attached. Barn, 35x50; wagon house and horse stable, 28x36; ice house; wood house; corn house. House watered by well; barns by springs; fields by springs and brooks. Catskill Mts. 6 miles distant; Hudson river, 5½ miles. Farm now occupied by owner. Reason for selling. old age. Price, $7,000. Address Mary C. Grant, Catskill, N. Y.

No. 245.— Farm of 140 acres; located 2 miles from postoffice (R. D. No. 1) at Catskill; 1¾ miles from railway station at Catskill, on line of West Shore R. R.; ½ mile from school; 2 miles from churches. Highways, hilly but smooth. Nearest village, Catskill, population 5,371, distant 2 miles, reached by highway. General surface of farm, hilly and rolling. Altitude, 100 feet. Nature of soil, sandy and clay loam. Acres that can be used as meadow, 80; in natural pasture, 60; small timber, pine, oak, and maple. Acres tillable, 80. A few apple, pear and cherry trees. Best adapted to hay, grain and gardening. Wire and board rail fences. Eight-room house in good condition. Barn with 4 stalls for horses, 7 stanchions and box stall, hay storage and wagon house; 2-story granary. House and barns watered by springs; fields by streams. Greene lake 3 miles distant, Hudson river 2 miles. Farm now occupied by tenant. Reason for selling, owner is widow of advanced age. Price $3,200. Terms, $1,000 cash, $2,200 bond and mortgage. Will rent with option to buy for $250 per year in advance. Farm borders Kaaterskill creek its entire length, affording good boating, bathing and fishing. Address H. B. Johnston, Catskill, N. Y.

No. 246.— Farm of 311 acres; located 6 miles from Catskill postoffice, R. D. No. 1; one mile from railway station at Lawrenceville, on line of Catskill Mt. R. R.; 1 mile from school; 2 miles from church. Good roads, but some hills. Nearest village, Catskill, population 5,371, distant 6 miles, reached by rail and highway. General surface of farm, half level, rest hilly and rolling. Altitude, 1,200 feet. Soil consists mostly of red loam. Acres that can be used as meadow, 120; acres now used as meadow, 95; in natural pasture, 90; in timber, 110, oak, chestnut, hickory and pine, ¾ matured. Acres tillable, 170. Fruit, 350 apple trees; a few pear, cherry, plum; blackberries and grapes. Adapted to hay, oats, corn, buckwheat and rye. Stone, wire and rail fences in fair condition. House of 12 rooms and basement, in fair condition. Main barn, 40x100 feet; 30x40 shed attached; sheep house, 30x40; hay barn, 30x40; ice house; granary; hog house; in fair condition. House watered by well and cistern; barns by well and spring; fields by running water. Catskill Mts. 2 miles distant. Farm now occupied by tenant. Reason for selling, to settle partnership. Price, $16,000. Terms, half cash, rest taken in mortgage. Small tenant house and barn included with farm. Address Hiram S. Palmer and Elizabeth E. Palmer, Catskill, N. Y., R. D. 1.

No. 247.— Farm of 130 acres; located 6 miles from postoffice at Catskill, R. D. No. 2; two miles from railway station at Cairo Junction, on line of Catskill Mt. Ry.; 1¼ miles from school; 3½ miles from churches. Good highways. Nearest village, Catskill, population 5,371, distant 6 miles, reached by rail or highway. Surface of farm, partly smooth and partly rough. Altitude, 1,200 feet. A variety of soils. Acres that can be used as meadow, 37; in natural pasture, 10; in timber, 20, oak, chestnut, hickory, maple. Acres tillable, 100. Fruit, 250 apple trees, pears and cherries. Best adapted to rye, buckwheat, oats, corn. Fences, in fair condition. House accommodates 50 people; 24 bedrooms; parlor, kitchen, dining room. Very large barns and wagon house; garage; granary; hog pen; hen house; all buildings in best condition. House watered by well and two cisterns; barns by very large cistern; fields by springs and brook. Catskill Mts. 2 miles distant. Farm now occupied by owner. Reason for selling, owner has other property. Price, $6,000. Terms, half down, rest mortgage. Will rent with option to buy; $500 in advance for house furnished. Fine location for boarders; has been established 40 years, with growing results. Address Mrs. Martin Fister, Catskill, N. Y., R. D. 2.

TOWN OF COXSACKIE

Population 3,453

No. 248.— Farm of 104 acres; located 2½ miles from Coxsackie; 2½ miles from railway station at West Athens, on line of W. S. R. R.; 1 mile from school; 3 miles from churches. Highways, good and level. Nearest city, Hudson, population 11,544, 5 miles distant, reached by ferry or rail. General surface, part rolling, mostly level. Nature of soil, some gravelly, more clay and black loam. Acres that can be used as meadow, 104. All can be used as pasture. Fruit, 100 apple trees, pears, plums and cherries for family use. Land adapted for all crops. Fences, good condition. 15 room house, good condition. Outbuildings: 2 barns, wagon house, corn house, shed, poultry house and pig pen. Extra large barn in addition. House, barn and fields watered by wells. Occupied by owner. Reason for selling, ill health and unable to care for it. Price, $5,000. Terms, easy. Address, Charles C. Wolfe, owner, Coxsackie, N. Y., R. D.

No. 249.— Farm of 160 acres; 2 miles from railway station at West Athens, on line of W. S. R. R.; ¼ mile from school; 1½ miles from church and 2 miles from milk station. Highways, good, hard dirt roads. Nearest large village Coxsackie, population, 2,309, 4 miles distant, reached by highway. General surface of farm, level. Altitude, 300 feet. Nature of soil, clay and black loam. Acres that can be used as meadow, 100; in natural pasture, 60; in timber, 20, oak and cedar. Acres tillable, 100. Fruit, 350 apple and 200 pear trees. Best adapted to hay and grain. Fences, wire and board, fairly good. House, 9 rooms, stone, in fair condition. Large barns, good condition, fitted with hay fork, stables for 9 cows and 7 horses. Watered, house, by spring; barns, by creek; and fields, by spring. Occupied by owner. Reason for selling, other business. Price, $6,000. Terms, $3,000 cash, balance on mortgage. Will rent on shares, owner having control. Price includes 3 horses, 2 cows, 2 heifers, wagons, ploughs, mowers, reapers, etc. Address Mr. Marion Lewis, owner, Valley Falls, N. Y.

No. 250.— Farm of 140 acres; located 3 miles from Coxsackie P. O., R. D. No. 1; 2½ miles from railway station at West Coxsackie, on line of W. S. R. R.; ⅛ mile from school and 2 miles from churches. Highways, level and good. General surface of farm, level. Altitude, 100 feet. Nature of soil, clay loam. Acres that can be used as meadow, 100; in natural pasture, 24; in timber, 16, red cedar and pine, good quality. Acres tillable, 124. Fruit, 50 apple and 20 pear trees. Adapted to hay, corn, oats, wheat, buckwheat and fruit. House, 10 rooms, good condition. Outbuildings: large new barn, granary, wagon house, hog house, etc. Watered, house by well and cistern; barns, same; and fields, by spring in pastures. Occupied by tenant. Reason for selling, other business. Price $5,000. Terms, ½ cash, balance on mortgage. Address Mrs. Rachel B. Turpin, owner, Coxsackie, N. Y.

No. 251.— Farm of 290 acres; located 1½ miles from Coxsackie postoffice, R. D. No. 1; 1½ miles from railway station at West Coxsackie, on line of West Shore R. R.; ½ mile from school; 1¼ miles from churches. Nearest city, Albany, population 107,979, distant 19 miles, reached by rail and auto bus on state road. General surface of farm, level, rich bottom land, no flooding. Altitude, 100 feet. Nature of soil, black clay loam. Acres that can be used as meadow, 190; in natural pasture, 25; in timber, 40, hardwood, oak and hickory. Acres tillable, 160. One hundred young trees, apples, pears, peaches, plums, cherries, grapes, asparagus, etc Adapted to corn, oats, rye, hay. Wire fences in good condition. New 8-room house, concrete and stone, steel ceilings, oak floors, all improvements. Two large barns needing some repairs. House watered by spring and cistern; barns and fields by springs. Hudson river 1 mile distant. Occupied by owner. Reason for selling, poor health and son leaving home. Price, $12,000. Terms, part cash. Considered best farm in vicinity. Will sell all personal property and crops if sold at once. Address F. W. Cole, owner, Coxsackie, N. Y.

TOWN OF DURHAM

Population 1,383

No. 252.— Farm of 140 acres, 1 mile from Durham P. O., 10 miles from railway station at Cairo on line of Catskill Mountain Ry.; ¾ mile from school and churches; 1 mile from butter factory. Highways, good, rolling. Nearest village, Durham, 1 mile distant, reached by highway. Surface of farm, nearly level. Soil, clay loam, fertile. Acres that can be used as meadow, 130; in natural pasture, 85; in timber, 10, hemlock, basswood, elm, hickory and beech; acres tillable, 130. Fruit, 100 apple and 25 pear trees, variety of plums, some peaches. Adapted to hay, corn and all kinds of grain. Fences, wire and rail, in good condition. House 12 rooms, 1½ stories, first-class condition. Barns: 76x30, with basement and stables for 22 cows, 4 horses, box stall: another, 36x30, with basement. Watered, house, by well and cistern; fields, by springs and brook; barn, by cistern. Catskill Mountains and Berkshire Hills visible from lawn. Occupied by tenant. Reason for selling, advanced age of owner. Price, $4,500. Terms to suit buyer. Address O. W. More, Durham, N. Y.

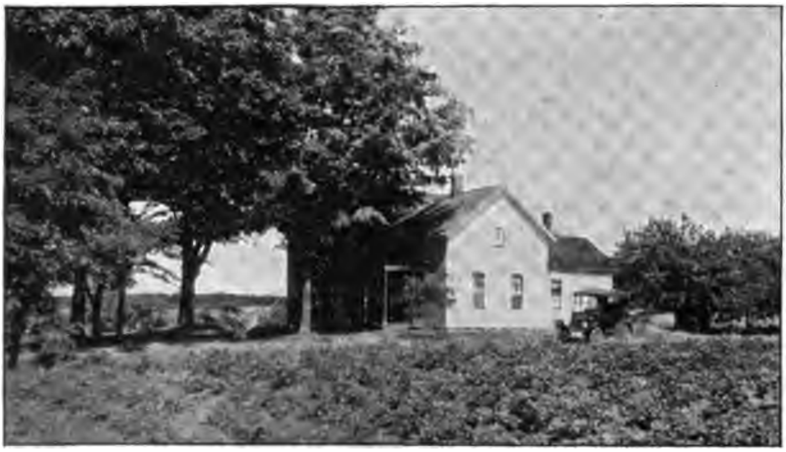


FIG. 30.— HOUSE ON FARM NO. 219, TOWN OF MARILLA, ERIE COUNTY.

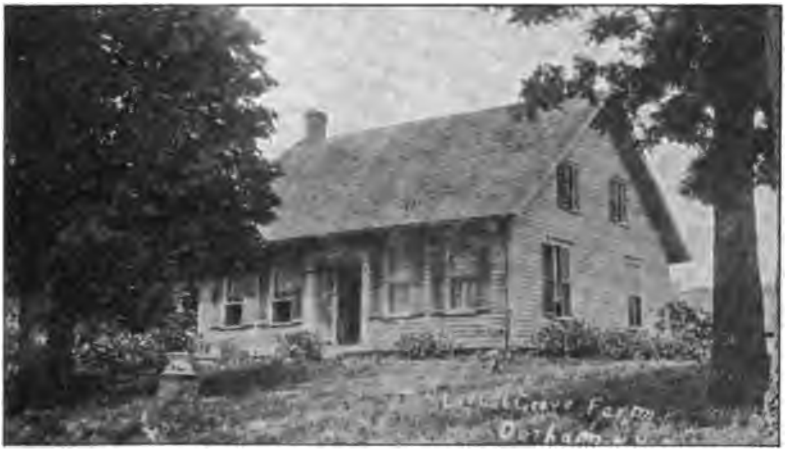


FIG. 31.— HOUSE ON FARM NO. 252, TOWN OF DURHAM, GREENE COUNTY.

No. 253.— Farm of 154 acres; located 1½ miles from station on line of W. S. R. R.; ½ mile from school; 1½ miles from church; 4 miles from butter factory; 1½ miles from milk station; 1½ miles from Norton Hill village and skimming station. Highways, good. Nearest village, Oak Hill, 3 miles distant, reached by highway. Surface, level, sloping slightly to south. Good soil, 50 acres of meadow; 20 acres of natural pasture; 8 acres of timber, white oak and pine; 125 acres tillable; 150 apple and 150 pear trees, all first-class varieties. Land adapted to rye, corn and oats. Fences, of stone and wire, in good condition. Comfortable 12-room house, 1½ stories, 24x36. Good barn, 72x30; sheep house, 52x18; wagon house, 30x24; granary, 20x16; pig pen, 20x16. House has spring water; barns have water in yard; fields have springs. Direct road from Coxsackie to Oak Hill. Occupied by owner. Reason for selling, owner is too old to work farm. Price, $4,000. Terms, one-half cash, balance on mortgage. Address Mrs. Barton Miller, owner, Norton Hill, N. Y.

No. 254.— Farm of 47 acres; located 1 mile from postoffice at Cornwallville, R. D. No. 1; 10 miles from railway station at Cairo, on line of Catskill Mt. Ry.; 1 mile from school and churches; 3 miles from butter factory. Good highways. Nature of soil, sandy loam. Acres that can be used as meadow, 35; acres now used as meadow, 20; in natural pasture, 23; in timber, 4, maple and oak. Acres tillable, 35. Some fruit. Adapted to corn, rye, oats, buckwheat. Stone fences not in very good condition. House, 18x30. . Barn, 24x36; shed, 16x30 attached, with horse stable; corn house; hen house; wagon house. House watered by well of soft water; barns by small stream; fields by spring and stream. Catskill Mts. near by. Farm now occupied by owner. Reason for selling, death of wife and poor health. Price, $1,200. Terms, cash. Address Charles A Brown, Cornwallville, N. Y.

No. 255.— Farm of 50 acres; located 2 miles from postoffice; 8 miles from railway station at Cairo, on line of Cairo Ry.; ½ mile from school; 2 miles from church; 3 miles from butter factory. Fair highways, some hills. Nearest village, Catskill, population 5,371, distant 18 miles, reached by 10 miles highway and 10 miles rail. General surface of farm, meadows and tillable land level; pasture rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 25; in natural pasture, 20; in timber, 5, beech, hickory, chestnut; mostly hickory. Adapted to corn, rye and wheat. Wood fences in fair condition. Eight-room house in good condition. Barn, 28x36; wagon house and stables, 18x30; large shed and hen house; corn house; all in good condition. House watered by well; barns by creek; fields by springs. Near Catskill Mts. Reason for selling, to settle estate. Price, $1.500. Terms one-half cash, balance bond and mortgage. Farm well adapted to fruit; good pear orchard on farm at present, also some apples. Address Wm. C. Latta, Cornwallville, N. Y.

No. 256.— Farm of 98 acres; located 1¼ miles from postoffice, R. D. No. 1, at Freehold; 8 miles from railway station at Cairo, on line of Catskill Mt. R. R.; ¼ mile from school; 1½ miles from churches; 1 mile from butter factory and milk station. Good highways. Nearest village, Catskill, population 5,371, distant 17 miles, reached by rail and highway. Surface of farm rolling. Altitude, 500 feet. Gravelly soil. Acres that can be used as meadow, 5; in natural pasture, 10; in timber, 7, hardwood. Acres tillable, 70. Fruit, 100 apple trees; a few pear and cherry trees. Best adapted to winter grains, oats, corn and buckwheat. Stone wall and wire fences. Good house, 30 rooms, large piazzas. Large stock and produce barn, cement floors in stables; wagon house and garage; chicken house and corn crib, etc.; all in good condition. House watered by well, cistern and spring; barns by well; fields by springs. Five miles from Catskill Mts., the whole range of which can be seen from piazza. Farm now occupied by tenant. Will rent for a year or longer, with the privilege of selling at any time. Price, $3,000. Terms, $1,000 down and rect in mortgage. Will rent for quarterly payments, $100 and taxes, or with option to buy. Place very suitable for a health resort. Address Eva Lacy Peck, Freehold, N. Y.

No. 257.— Farm of 109 acres; located 1 mile from postoffice at East Durham; 7 miles from railway station at Cairo, on line of Catskill Mt. Ry.; 1 mile from school, churches, butter factory, and milk station. Highways, dirt road, some hill, fairly good. Nearest villages, Cairo and Catskill, distant 7 and 17 miles respectively, population of Catskill, 5,371; both reached by rail and highway. General surface of farm, upland, some hill. Soil, good loam. Acres that can be used as meadow, 12; in timber, 20, maple, beech, hickory, hemlock, basswood, ash, etc. Acres tillable, 89. Fruit: apple, pear, peach and plum trees. Adapted to all kinds of grain. Stone and wire fences. Good house, 35x40. Barn, 30x54; shed, 30x32; two wagon houses, one 30x40; hen house, etc. House and barns watered by wells; fields by springs and brooks. Near Catskill Mts. Farm now occupied by owner. Reason for selling, poor health. Price, $4,500. Farm is in good state of cultivation. Good site for boarding house or summer residence. Address E. E. Schermerhorn, East Durham, N. Y.

TOWN OF GREENVILLE

Population 1,550

No. 258.— Farm of 10 acres; located 1½ miles from Freehold P. O., R. D. No. 2; 3 miles from railway station at Cairo, on line of W. S. R. R.; 1½ miles from school; 1½ miles from church, and 2 miles from butter factory. Highways, good. General surface of farm, level. Nature and quality of soil, rich. Acres in natural pasture, 3. Acres tillable, 7 Fruit: 30 apple, 10 pear, 8 cherry, 3 plum and 3 quince trees. Best adapted to corn and buckwheat, also good for poultry raising. Fences, stone wall. Large 8-room house, 2 stories, in good condition. Outbuildings: barn, 3 stalls; poultry house which holds 150 chickens; ice house, wood house, all in good condition. House watered by cistern pump and fields by spring. Occupied by owner. Reason for selling, other business. Price, $2,800. Terms, cash. Address G. L. and Agnes J. Gronlund, owners, Freehold, N. Y.

No. 259.— Farm of 70 acres; located 2 miles from Freehold, 6 miles from railway station at Cairo, on line of C. M. R. R.; 1 mile from school and 2 miles from churches. Highways, good, some hills. Acres in natural pasture, 10; in timber, 12, pine, oak, hickory and maple. Acres tillable, 48. Fruit: 150 apple, 5 pear, 2 cherry and 3 plum trees, also raspberries and strawberries. Adapted to hay, corn, oats, rye and potatoes. Stone and wire fences. House, 30x32, nearly new, 10 rooms. Barn, 40x46, 2 stories, with silo and shed; hog house, 12x24; grain house, 16x20; wagon house, 20x24, all new and painted. House, and barns watered by well; fields, by spring and brook. Near Catskill mountains. Occupied by owner. Reason for selling, other business. Price. $2,800. Terms, ⅓ cash, balance on mortgage at 5 per cent. Address, E. Simpkin, owner, Freehold, N. Y. Will rent with option to buy.

No. 260.— Farm of 101 acres; located 2½ miles from Grapeville P. O., R. D. No. 1; 10 miles from railway station at Coxsackie, on line of W. S. R. R., ½ mile from school; 2½ miles from church; 5 miles from butter factory and milk station. Highways, fairly good country road. Nearest city, Albany, population 107,979, 25 miles distant, reached by highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 10: in natural pasture, 30; in timber, 7. hemlock, maple, beech and birch. Acres tillable, 54. Fruit, old apple orchard of 35 trees and about 60 young trees coming into bearing. Adapted to all crops. Fences, not very good. House. 11 rooms, 4 of which are 15 feet square. good condition and painted. Outbuildings: 2 barns, poultry house, wagon house, granary, pig pen, wood house. good condition. Watered, house by well, barns, by spring, and fields by springs. Reason for selling, to settle estate. Price, $2,500. Terms, cash preferred. Owner will rent with option to buy. Address Miss Edna M. Seaman, owner, New Baltimore Station, N. Y.

No. 261.— Farm of 125 acres; located 1½ miles from Freehold postoffice (R. D. No. 2); 4½ miles from railway station at Cairo on line of Catskill Mt. Ry.; ¼ mile from school; 1½ miles from church; 4½ miles from butter and cheese factories and milk station. Good highways. Nearest village, Catskill, population 5,371, distant 14 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil. loam. Acres that can be used as meadow, 75; acres now used as meadow. 50; in natural pasture, 25; in timber. 25, mostly pine and oak. Acres tillable. 75. Fruit trees, 110 apple, 15 pear, 7 cherry, currants, grapes, all varieties wild berries. Best adapted to grass, grain and potatoes. Stone and wood fences in fair condition. House, 12

Fig. 32.— View from House on Farm No. 256, Town of Durham, Greene County.

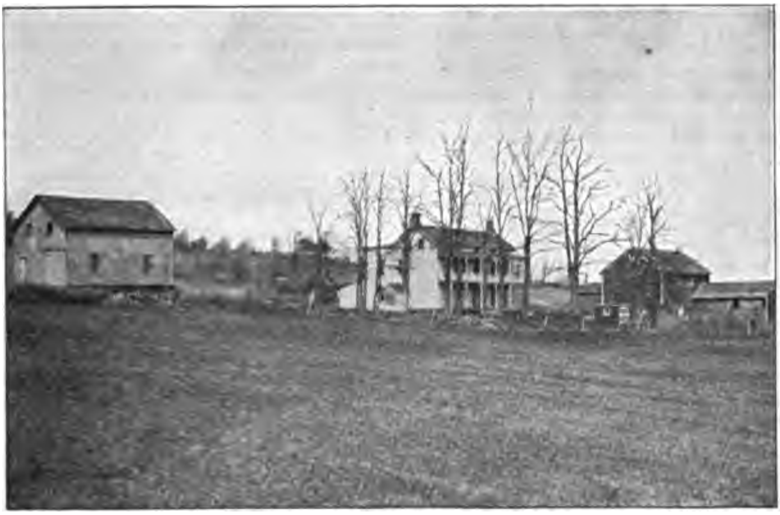


Fig. 33.— House and Farm Buildings on Farm No. 256, Town of Durham, Greene County.

rooms, in good condition. Barn, stables, wagon house, hog pen, poultry house, wood-house, smokehouse, granary, condition fair to good. House and barns watered by wells; fields by springs and streams. Catskill Mts. 7 miles distant. Occupied by owner. Reason for selling, unable to work farm. Price, $4,000. Terms, cash, or half cash with satisfactory guaranty. The timber on this farm will cut 50,000 ft of pine alone. Is essentially a dairy farm. Address Iva Simpkins, owner, Freehold, N. Y.

TOWN OF LEXINGTON
Population 926

No. 262.— Farm of 122 acres; located 6 miles from railway station on line of U. & D. R. R.; ¼ mile from churches; 1 mile from butter factory; 8 miles from cheese factory. Highways, partly stone and partly concrete. Nearest village, distant 8 miles, population about 1,000, reached by highway. General surface of farm, partly rolling and partly flat. Altitude, 2,000 feet. Good soil. Acres that can be used as meadow, 60; acres now used as meadow, 40; in natural pasture, 50; in timber, 22, all kinds of hard wood. Acres tillable, 30. Fruit: 60 apple trees, 6 plum, 2 cherry, blackberries, raspberries, strawberries, currants, gooseberries. Adapted to all kinds of crops. Fairly good stone fences. Good house, 9 large rooms. Barn, 30x14; shed, 25x46; hog pen hen house. House and barn watered by pipes; fields by springs. Farm now occupied by owner. Reason for selling, poor health. Price, $1,650. Terms, cash. Farming machinery included if sold in reasonable length of time. Address Mrs. Agnes B. Butler, Westkill, N. Y.

TOWN OF NEW BALTIMORE
Population 1,840

No. 263.— Farm of 105 acres; located 1½ miles from Grapeville P. O.; 8 miles from railway station at Coxsackie, on line of W. S. R. R. and Hudson River boats; 1 mile from school; 1½ miles from church; 5 miles from butter factory. Highways, good, partly state road. Nearest large village, Coxsackie, population 2,309, 8 miles distant, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 54; in muck, 5; in natural pasture, 25; in timber, 25, hemlock, pine, chestnut and hard wood; acres tillable, 75. Fruit: 100 apple, a few pear, plum and cherry trees, 25 butternut trees. Adapted to rye, buckwheat, oats, potatoes, hay and fruit. Fences, stone and wire, in fair condition. House, 10 rooms and closet, painted, stone cellar, in fair condition. Barns, ample room, in fair condition. Watered, house, by well; barns, by running water; fields, by springs and creek. Pond of 1 acre, 35 to 40-horsepower. Occupied by owner. Reason for selling, poor health. Price, $4,500. Terms, two-thirds cash, balance to suit purchaser. Address E. D. Stewart, owner, Urlton, N. Y.

No. 264.— Farm of 110 acres; located 1 mile from Medway P. O.; 4½ miles from railway station at Coxsackie, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches. Highways, fairly good. General surface, rolling. Altitude, 500 feet. Nature of soil, principally gravelly loam. Acres that can be used as meadow, 60; in natural pasture, 10; in timber, 10, oak, hickory, chestnut, pine, etc. Acres tillable, 90. Fruit, 100 trees, mostly apple. Adapted to rye, buckwheat, oats, corn, hay and wheat. Fences, stone walls, good condition. House, 2 stories, 11 rooms, good, painted inside and out August, 1914. Outbuildings: barn, 34x56, 22 ft. posts; ice house, carriage house and milk room combined. House watered by well and cistern, barns by well, fields by springs. Occupied by owner in summer only. The land is leased by the year and is well cultivated. Reason for selling, owner is a widow. Price, $4,000. Terms, to suit buyer. Address Mrs. Harriet S. Odell, owner, 3301 Barker Ave., Williamsbridge, New York city.

No. 265.— Farm of 120 acres; located 3 miles from West Coxsackie P. O., R. D. No. 1; 3 miles from railway station at Coxsackie, on line of W. S. R. R.; 1 mile from school; 2 miles from churches; 5 miles from butter factory; 3 miles from milk station. Highways, good, a little hilly. Nearest city, Albany, population 107,979, 20 miles distant, reached by rail or highway. General surface of farm, level and some rolling. Nature of soil, black and sandy loam. Acres in meadow, 25; in natural pasture, 8; in timber, 42, oak. Acres tillable, 80. Fruit, 850 apple trees, all varieties, also pears, etc. Adapted to hay, corn, oats, rye and buckwheat. Fences, stone wall, very good. House, large, 15 rooms, in first-class condition. Outbuildings: large basement barn, sheds attached; 2 poultry houses; 1 hog house; wagon house and granary; new fruit cold storage, will hold 1,000 barrels of apples. House watered by cistern and well, barns by brook and spring, and fields by brook. Occupied by owner. Reason for selling, wishes smaller place. Price, $9,500. Terms, half cash, balance on mortgage. Address Albert R. Hotaling, owner, West Coxsackie, N. Y.

No. 266.— Farm of 55 acres; located ¼ mile from postoffice at Grapeville; 8 miles from railway station at West Coxsackie, on line of West Shore R. R.; ¼ mile from churches; 5 miles from cheese factory and condensing plant. Very good highways. Nearest large village, Coxsackie, population 2,309, distant 8 miles, reached by highway. General surface of farm, partly hilly and partly rough. Altitude, 1,000 feet, Acres used as meadow, about 2; in natural pasture, 12; in timber, 10, pine, hardwood, chestnut, some hemlock; number tillable. 28 or 30. About 100 apple trees. Tillable part adapted to corn, rye and potatoes. Part stone and part rail fences. Ten-room house in very good condition; good place for boarders. Barn of good size; new blacksmith shop; 3 hen houses; granary and corncrib, in good condition. A good location for blacksmith. House and barns watered by wells; fields by running water. Grist mill close by. Now occupied by owner. Reason for selling, owner only occupant and has no use for it. Price, $1,700. Terms, $1,000 down, balance mortgage if desired. Will rent. Address Mrs. Mary Jane Robinson, owner, Grapeville, N. Y.

HAMILTON COUNTY

Area, 1,745 square miles. Population, 4,491. Number of farms, 470. County seat, Lake Pleasant.

This county occupies the central portion of the great wilderness region of northeastern New York.

Its surface is rugged, mountainous, rocky and is mostly covered with forests. Massive ranges of mountains cross each other in various directions. Within the valleys, between these mountain ranges are several remarkable chains of lakes, many of them connected by navigable streams. These lakes are long and narrow, bordered by steep banks and mountain peaks. The waters are clear, cold and pure and discharge in almost all directions. The entire county is included in what is known as the Adirondack Park which also includes a part of Franklin, St. Lawrence, Essex, Warren and Herkimer counties. The region is much visited by the lover of wild scenery and sportsman and the tourist during the summer months. The region abounds in game and the lakes and streams are well stocked with trout. Peat, iron ore, limestone, sand stone and graphite are found. The number of farms reporting domestic animals is 429, dairy cows, 907; horses, 636; swine, 440; sheep, 1,607; poultry, 11,061. These figures show that most of the products raised in this county are for the supply of camps, cottages, hotels, and summer tourists. There were raised, however, in the valleys, 1,387 bushels of shelled corn, 12,235 bushels of oats, and 21,913 bushels of potatoes. This locality affords a health and recreation resort of the most useful and beneficial character to the public. It has fewer farms than any other county of the state, and yet the farm property is valued at $1,653,827.

TOWN OF HOPE

Population 250

No. 267.— Farm of 127 acres; located ½ mile from Hope P. O. and 7 miles from Northville, on line of F. J. & G. R. R.; ¾ mile from school and ¼ mile from churches. Highways, state road. Nearest village, Northville, population 1,635, 7 miles distant, reached by highway. General surface, rolling and level. Nature of soil, sandy loam. Acres that can be used as meadow, 50; in natural pasture, 40; in timber, 37, sugar bush, etc. Acres tillable, 25. Fruit, 25 apple trees. Adapted to beans, corn, buckwheat, oats and potatoes. Fences, board. House, 26x50, good condition. Outbuildings: 2 barns 26x36; shed, 20x24; poultry house; corn house and hog pen. Watered, house by well; barns, same; and fields, by brooks. Sacandaga river bounds farm on west. Adirondack mountains, 35 rods from house. Reason for selling, old age. Price, $1,900. Terms, ⅓ cash, balance to suit purchaser. Address John A. Willard, owner, Northville, N. Y.

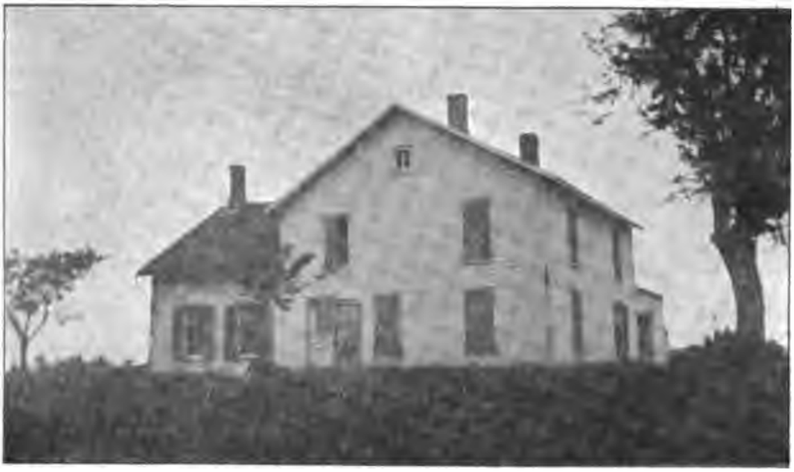


FIG. 34.— HOUSE ON FARM NO. 259, TOWN OF GREENVILLE, GREENE COUNTY.

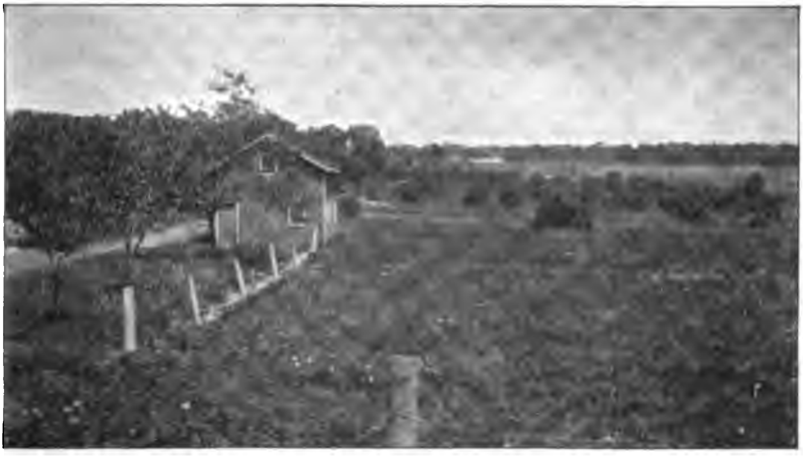


FIG. 35.— VIEW ON FARM NO. 259, TOWN OF GREENVILLE, GREENE COUNTY.

TOWN OF INLET

Population 219

No. 268.— Farm of 4 acres; located ¼ mile from Eagle Bay P. O. and railway station on line of Raquette Lake Railroad; 2 miles from school and churches; 10 miles from butter and cheese factory. Highways, state road. General surface, rolling. Altitude, 1,728 feet. Nature of soil, sandy. Acres in timber, all, virgin forest. House, 16 rooms, frame, bath, open fireplace, verandas on three sides. Outbuildings: shed, 20x30; ice house. House watered by running water and well. On edge of Fourth Lake of Fulton chain of lakes in the Adirondack mountains. Occupied by owner. Reason for selling, widow. Price, $7,500. Terms, easy. Would be ideal place for summer boarders. Address Mrs. Martha J. Hichman, owner, 358 Ann St., Little Falls, N. Y.

HERKIMER COUNTY

Area, 1,754 square miles. Population, 64,109. Annual precipitation, 50.68 inches. Annual mean temperature, 43.2°. Number of farms, 3,092. County seat, Herkimer.

This county is situated in the northeastern part of the state and is long and narrow. It is intersected by the Mohawk and Black rivers and is also drained by the East and West Canada creeks and the Moose river.

The surface is diversified with high ridges, steep hills, valleys and extensive forests. A large part of the northern portion of the county has the same general features of the other regions of the Adirondacks. The part of the county south of the north branch of the West Canada creek becomes gently undulating and suitable for agriculture. The soil most commonly found is a yellow clay loam, although in the valleys along the West Canada Creek and the Mohawk River the black slaty loam predominates. The southern part of the county is crossed by the New York Central railroad and the Erie Canal and the northern part by a branch of the New York Central railroad. Electric lines extend from Little Falls through Herkimer to Utica and from Herkimer to Richfield Springs, Otsego county, thus giving ample local markets. The value of all farm property is $19,607,700, an increase of 30.4 per cent in ten years. The leading crops are: corn, shelled, 49,842 bushels; oats, 508,680 bushels; barley, 22,116 bushels; buckwheat, 13,425 bushels; potatoes, 161,310 bushels; hops, 15,200 pounds; hay and forage, 119,199 tons. Average price of improved land is $29.30. Domestic animals reported: dairy cows, 30,856; horses, 7,690; swine, 6,652; sheep, 1,259; poultry, 164,409; production of milk, 21,747,574 gallons; total receipts from sale of dairy products, $2,175,797. There are 92 milk stations and factories in the county, 183 district schools, and academies at Herkimer and Little Falls. These, together with the splendid high schools of the towns and villages offer educational advantages of the highest rank for the residents of the county. The agricultural organizations consist of a county agricultural society and 20 granges.

TOWN OF COLUMBIA

Population 1,090

No. 269.— Farm of 135 acres; located 6 miles from Ilion P. O., R. D. No. 2, 3 miles from railway station at Cedarville on line of D. L. & W. R. R.; ¼ mile from school; 1 mile from Protestant church; 1½ miles from butter factory and cheese factory; 3 miles from milk station; 8 miles from milk condensing plant. Highways, hilly. Surface of farm, rolling. Soil, clay, good. Acres in meadow, 50; in natural pasture, 65; in timber, 20, maple. Acres tillable, 115. Fruit, apples and pears. Best adapted to corn and potatoes. Fences, wire, good condition. House, 20x30, 2 stories. Outbuildings: basement barn, 30x70; barn, 24x52, good condition; also barn, 20x44. House watered by pump; barns and fields, by pond. Occupied by tenant. Reason for selling, owner in other business. Price, $6,000. Terms, one-third down, balance on mortgage for term of years. Address Chas. D. Hopkins, owner, Cedarville, N. Y. Will rent.

No. 270.— Farm of 165 acres; located 6 miles from Ilion P. O., R. D. No. 2, and railway station, on line of N. Y. C. R. R.; ½ mile from school; 2 miles from church, butter factory and cheese factory; 4 miles from milk station; 8 miles from milk condensing plant. Highways, hilly. Surface of farm, rolling. Soil, light clay. Acres in meadow, 60; in natural pasture, 60;

in timber, 40. Acres tillable, 120. Fruit, apples and pears. Best adapted to corn, potatoes and oats. Fences, wire, fair condition. House, 26x36, 1½ stories; house, 18x24, 1½ stories. Outbuildings: barn, 30x66; stables, 16x66. House watered by pump, fields by creek. Occupied by tenant. Reason for selling, owner living in village. Price, $5,000. Terms, $1,500 down, balance on mortgage. Address Chas. D. Hopkins, owner, Cedarville, N. Y. Owner will rent.

TOWN OF GERMAN FLATS

Population 12,809

No. 271.— Farm of 132 acres; located 3½ miles from postoffice at Mohawk, R. D. No. 1; 4 miles from railway station at Mohawk, on line of West Shore R. R.; 2 miles from school; 3½ miles from churches; 4 miles from milk station; 7 miles from condensing plant. Good highways. Nearest village, Mohawk, population 2,577, distant 3½ miles, reached by highway, 3 miles state and ½ mile dirt road. General surface of farm, rolling. Acres that can be used as meadow, 65; acres now used as meadow, 40; in natural pasture, 60 to 65; in timber, 40, hemlock, beech and maple, good. Acres tillable, 65. About 40 apple and a few plum trees. Adapted to corn, oats and potatoes. Good fences. House of 14 rooms, in good condition. One barn for stock, about 40x60; one hay barn about 30x50; small hog house; one milking house. House watered by well; barns by spring; fields by stream. Farm now occupied by tenant. Reason for selling, to close estate. Price, $4,000. Good stream of water runs through pasture. Address Jay Brackett, Administrator, Mohawk, N. Y.

No. 272.— Farm of 85 acres; located 1 mile from Mohawk postoffice (R. D. No. 2); 1 mile from railway station at Mohawk, on line of West Shore R. R.; 1 mile from school, churches and butter factory; 2 miles from milk station; 4 miles from condensing plant. Highways, state road. Nearest village, Mohawk, population 2,577, one mile distant, reached by rail and highway. Surface of farm, rolling. Nature of soil, dark loam. Acres used as meadow, 40; in natural pasture, 25; in timber, 10, hardwood. Acres tillable, 50. Fruit trees, 100 apple, 20 plum, 5 pear. Good wire fences. Main house, 20x24, wing, 16x24, in first class condition. Main barn, 30x40; wing, 24x28, in good condition. House and barn watered by spring water, fields by creek. Mohawk river 1½ miles away. Occupied by owner. Reason for selling, poor health and old age. Price, $5,000. Terms, one-half down. Address J. J. Cristman, Mohawk, N. Y., R. D.

No. 273.—Farm of 73 acres; located 4 miles from Mohawk postoffice (R. D. No. 2); railway station at door, Mohawk Valley R. R.; 1 mile from school; 3 miles from M. E. church; 1½ miles from cheese factory and condensing plant. Highway, state road. Nearest village, Mohawk, population 2,577, 4 miles distant, reached by rail and highway. Surface of farm hilly, rolling and level. Situated in valley. Gravelly and good black soil. Acres that can be used as meadow, 35; acres now used as meadow, 25; in natural pasture, 35; in timber, 3, maple, etc. Acres tillable, 60. Fruit trees, 50 apple, 2 pear, 25 plum. Adapted to corn, oats, potatoes, beans and garden truck. Barbed wire fences in fair condition. Eight-room house in fair condition. Basement barn, 35x60; shed, 16x30; hog pen, 12x24; poultry house, 15x30. Pump at door, creek in yard; field watered by creek and springs. Mohawk river 3½ miles distant. Occupied by owner. Reason for selling, poor health. Price, $5,000. Terms, ⅓ down, rest on mortgage. Address Irvin S. Day, owner, Mohawk, N. Y.

No. 274.— Farm of 350 acres; located 5 miles from Mohawk postoffice, (R. D. No. 2); 5 miles from railway station at Mohawk, on line of N. Y. C. R. R.; ¾ mile from school; 2 miles from M. E. church; ½ mile from butter and cheese factories and milk station; 8 miles from condensing plant. Good state road. Nearest village, Mohawk, population 2,577, distant 5 miles, reached by highway and electric line. Surface of farm, rolling and level. Nature of soil, dark loam, soil deep. Acres that can be used as meadow, 250; acres now used as meadow, 150; in natural pasture, 150; in timber, 50, maple, beech, ash, basswood and hemlock. Acres tillable, 275. Fruit trees, 1,000 apple; pear, plum and cherry. Adapted to hay, oats, barley, corn and potatoes. Fences, wire on cedar posts, in good condition. Three good large houses. Three large barns, corn cribs, granary, hog house, etc. House watered by wells and springs; barns by running water; fields by brook and springs. Mohawk river distant 5 miles. Occupied

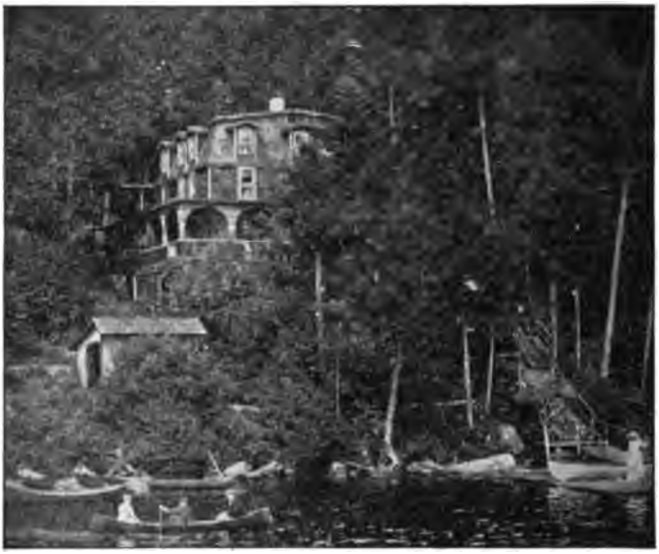


FIG. 36.— HOUSE ON FARM NO. 268, TOWN OF INLET, HAMILTON COUNTY.

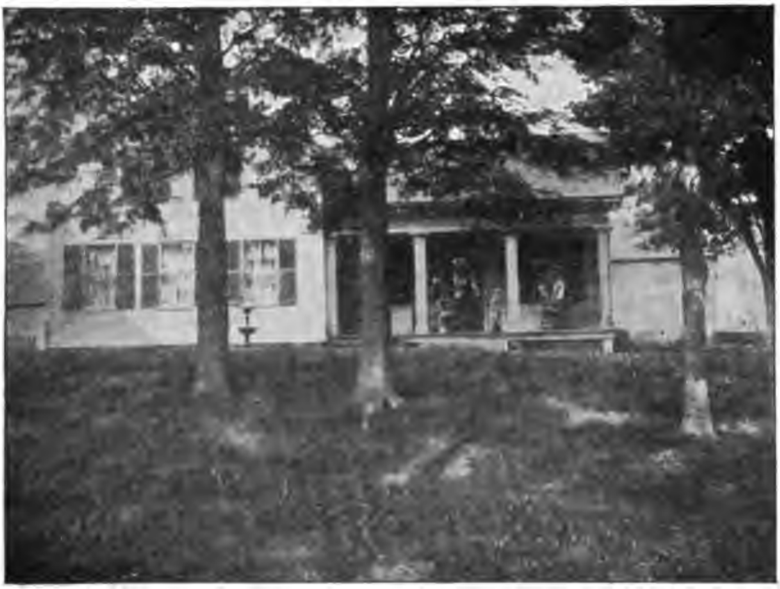


FIG. 37.— HOUSE ON FARM NO. 283, TOWN OF RUSSIA, HERKIMER COUNTY.

by owner. Reason for selling, owner going into other business. Price, $50 per acre. Terms, half down, balance on mortgage. Address Albert P. Keno, owner, Mohawk, N. Y.

No. 275.— Farm of 128 acres; located 1½ miles from postoffice at Mohawk, R D. No. 2; two miles from railway station at Mohawk, on line of West Shore R. R.; ½ mile from school; 1½ miles from churches, 1 mile from butter and cheese factories; 1½ miles from milk station. Highways, hilly, but good. Nearest villages, Mohawk and Ilion, population 2,577 and 8,900 respectively, distant 1½ miles, reached by highway. General surface of farm, rolling and level. Altitude, 1,200 feet. Nature of soil, clay. Acres that can be used as meadow, 90; acres now used as meadow, 30; in timber, 8, oak, hemlock and maple. Acres tillable, 90. Fruit, 100 apple, 10 pear and 10 cherry trees. Adapted to corn and potatoes. Wire fences in fair condition. One 8-room house; one 12-room house, both in good condition. Two large barns, steel roofs; granary; hop house; new hen house. Buildings are worth $6,000 or $7,000. House watered by pump; barns by water in pipes; fields by springs. Mohawk river 1½ miles distant. Reason for selling, to settle estate. Price, $10,000. Terms to suit purchaser. Best location and view in Mohawk valley. Address C. M. McCoy, Executor, Herkimer, N. Y.

No. 276.— Farm of 120 acres; located 3 miles from Mohawk postoffice (R. D. No. 2); ⅛ mile from railway station at Ranneys Crossing, on line of Herkimer and Otsego R. R.; ½ mile from school; 3 miles from churches; 2 miles from cheese factory; 3 miles from milk station; 6 miles from condensing plant. Highways, state road. Nearest village, Mohawk, population 2,577, distant 3 miles, reached by rail and highway. Surface of farm, rolling. Nature of soil, dark loam. Acres used as Meadow, 50; in natural pasture, 45; in timber, 25, hardwood. Acres tillable, 75. Fruit trees, apple, 25 plum, 10 cherry; 30 butternut. blackberries. Adapted to corn, potatoes and grains. Good barbed wire fences. Large 11-room house in good condition. Two large barns; carriage barn; woodshed; chicken house; ice house; creamery in good condition. House and barns watered by spring water; fields by springs and creek. Occupied by owner. Price, $10,000. Terms, half down. Will rent with option to buy. This place is an ideal country home with modern conveniences throughout. Address Mrs. Mary L. Ranney, owner, Mohawk, N. Y.

TOWN OF LITTLE FALLS

Population 627

No. 277.— Farm of 166 acres; located 7 miles from railway station at Little Falls on line of W. S. Ry.; 50 rods from school and church; 1 mile from cheese factory; 1¼ miles from milk station; 7 miles from milk condensing plant. Highways, state road. Surface of farm, level and rolling. Acres that can be used as meadow, 125; in natural pasture, 45; in timber, 6, maple, beech, basswood and hemlock. Acres tillable, 160. Fruit, good apple orchard, also pears and plums. Adapted to hay, corn, oats and barley. Fences, cedar post and wire, good condition. House, new, 14 rooms, fine condition. Outbuildings: barn, 36x85; cow barn attached, 125x18, wagon house, tool house, poultry and hog house. Water in house and barn, fields watered by spring. Occupied by owner. Reason for selling, poor health. Price, $7,500. Terms, ⅓ cash, balance on mortgage. Address A. B. Davis, owner, 16 John street, Ilion, N. Y. Owner will rent.

No. 278.— Farm of 254 acres; located 3 miles from Little Falls P. O., R. D., and railway station, on lines of N. Y. C. & West Shore R. Rs.; ½ mile from school; 3 miles from churches. Milk called for at farm. Highways, good. Little Falls has population of 13,022 and is reached by highway. Surface of farm, rolling. Soil, black and sandy loam. Acres used as meadow, 100; in natural pasture, 100; in timber, 15, beech, maple and hemlock. Acres tillable, 200. Fruit, enough for home use. Adapted to hay, wheat, oats, barley, rye, corn, potatoes and garden truck. Fences, cedar posts and wire, good condition. Two houses, one new, 14 rooms each, good condition. Outbuildings: main barn, 38x127; horse barn, 30x50; tool house, 27x30; corn house, 12x20, good condition. Watered, house and barns by running water, fields by creeks and springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, $60 per acre. Terms, $5,000 down, balance on mortgage at 5 per cent. This farm is well supplied with running water. Address Richard DeLong, owner, Mohawk, N. Y., R. D. No. 3.

No. 279.— Farm of 166 acres; located 6 miles from Mohawk and 7 miles from Little Falls on N. Y. C. & W. S. R. Rs.; 15 minutes walk from church; ¼ mile from cheese factory; 1¼ miles from milk station and 7 miles from condensing plant. Highways, state road. Nearest city, Little Falls, population 13,022, 7 miles distant. Reached by trolley. General surface, rolling. Acres that can be used as meadow, 140; in timber, 6, maple, beech, birch, basswood and hemlock. Acres tillable, 160. Fruit, apples enough for family use. Best adapted to hay, corn, oats and barley. Fences, wire, in good condition. House, large, concrete cellar. Outbuildings: barn, 85x36 with cow stable attached, 120x17 in good condition, also two other barns. Watered, house and barns by wells; fields, by springs. Occupied by owner. Reason for selling, poor health. Price, $45 per acre. Terms, ⅓ cash and remainder on mortgage. Address A. B. Davis, 16 John street, Ilion, N. Y.

TOWN OF MANHEIM

Population 3,885

No. 280.— Farm of 98 acres; located 4 miles from Little Falls postoffice, R. D. No. 2; one mile from railway station at Inghams Mills, on line of Little Falls & Dolgeville R. R.; ½ mile from school; 2 miles from church; 1 mile from milk station; 7 miles from condensing plant. Good macadam and gravel highways. Nearest city, Little Falls, population 13,022, distant 4 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 600 feet. Nature of soil, clay loam. Acres that can be used as meadow, 85; number now so used, 67; in natural pasture, 18; in timber, 13, beech, maple, hemlock, basswood. Acres tillable, 85. Fruit, 140 apple trees, 16 pear, 24 plum, 10 cherry, 9 prune; currants and grapes. Adapted to all crops. Wire and some stone wall fences in good condition. Two-story house, 30x40, in good condition. Cow barn, 26x60; horse barn and hen house, 30x40; hog pen, 26x16; wagon house, 18x24; cheese house, 20x36; ice house, 12x16, in good condition. House watered by good well; barns by running water from well; fields by springs. Mohawk river 4 miles distant. Farm now occupied by owner. Reason for selling, to settle partnership business. Price, $8,000. Terms, $2,900 down, balance on mortgage at 5%, $400 to be paid yearly on principal if possible. Farm will be sold with or without stock or crops; possession given at once. Address W. S. & W. C. Kimball, Little Falls, N. Y., R. D. 2.

TOWN OF NEWPORT

Population 1,724

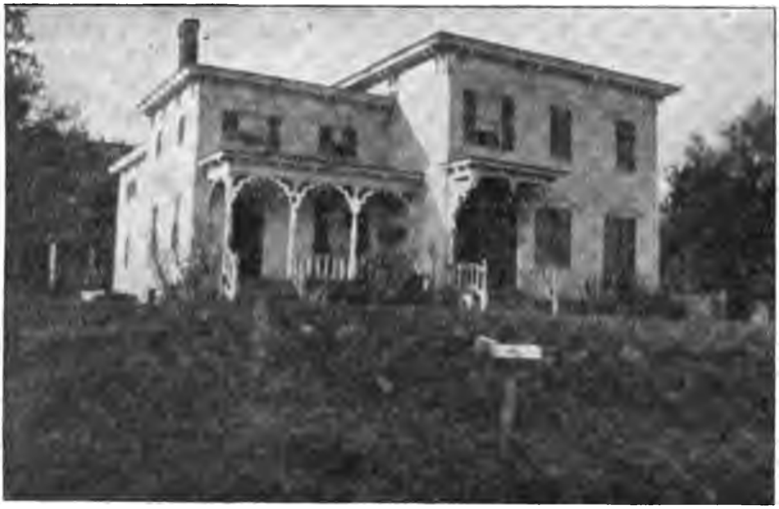
No. 281.— Farm of 37 acres; located ½ mile from P. O., R. D.; ½ mile from railway station at Newport on line of M. & M. R. R.; ¼ mile from school, churches, milk station and condensing plant. Highways, state road. Nearest village, Newport, population 697, ¼ mile distant, reached by highway. General surface, rolling. Nature of soil, rich loam. Acres that can be used as meadow, 37. Acres tillable, 37. Best adapted to hay, corn, grain of any kind. Fences, wire, in good condition. Fields watered by brook. Village reservoir on farm. Reason for selling, to settle an estate. No buildings. Price, $4,000. Terms, easy. Address A. G. Hall, owner, Amsterdam, N. Y.

No. 282.— Farm of 313 acres; 3½ miles from Poland, on line of N. Y. C. R. R.; ½ mile from school; 3½ miles from churches and milk station; 4 miles from condensing plant. Highways, dirt and state road. Nearest village, Poland, population 315, 3½ miles distant. Reached by highway. General surface, level. Nature of soil, clay loam. Acres that can be used as meadow, 80; in natural pasture, 200; in timber, 35, hard wood and hemlock. Acres tillable, 200. Fruit, some common varieties. Best adapted to hay, oats, corn and potatoes. Fences, mostly wire in good repair. House, 8 rooms. Outbuildings: large basement barn, storage barn, horse barn and hog house, all in good condition. Watered, house and barns by well; fields, by brooks and springs. Occupied by tenant. Reason for selling, other business. Price, $47.50 per acre. Terms, ⅓ cash and balance on mortgage. Address J. W. Brayton, Poland, N. Y.

TOWN OF RUSSIA

Population 1,747

No. 283.— Farm of 152 acres; located ⅛ mile from Grant P. O.; 4 miles from railway station at Hinckley on line of N. Y. C. R. R.; ⅛ mile from school and churches; 1½ miles from cheese factory. General surface, pastures



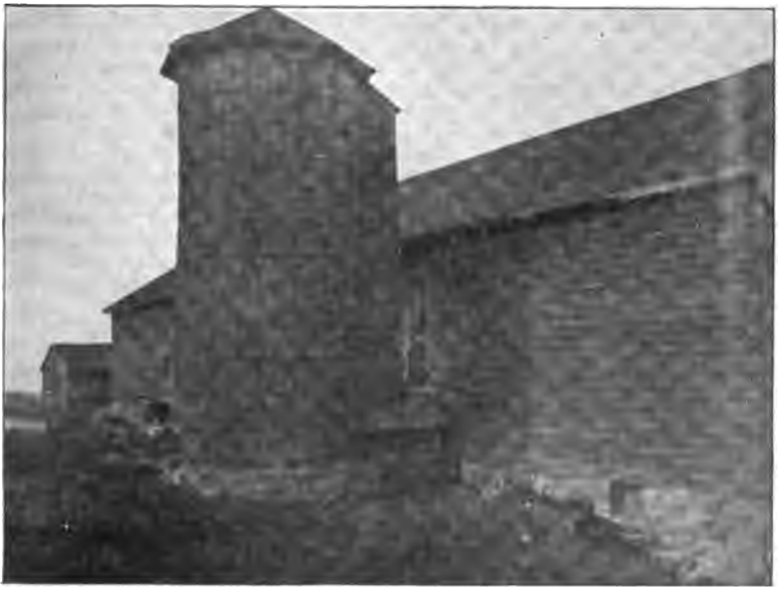


FIG. 38.— BUILDINGS ON FARM NO. 278, TOWN OF LITTLE FALLS, HERKIMER COUNTY.

rolling, meadow, flat and level. Altitude, 1,220 feet. Nature of soil, loam. Acres in meadow, 60; in pasture, 90; in timber, 10, spruce and hardwood. Acres tillable, 75. Fruit, 10 apple trees. Adapted to hay, oats, corn, barley and buckwheat. Fences, wire, fair condition. House, 10 rooms, in good condition. Beautiful view from porch. Over 4 miles frontage on Hinckley Lake. Outbuildings: cow barn 28 x 75 with basement, horse barn 24 x 40 with basement, shop 20 x 30, hay barn, poultry house. House and barns watered by running water; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $3,500. Terms, easy. Address Corey Garlock, owner, Grant, N. Y.

TOWN OF SCHUYLER

Population 1,130

No. 284.— Farm of 200 acres located 6 miles from Frankfort P. O. (R. D. No. 1); 5½ miles from railway station at North Frankfort, on line of N. Y. C. R. R.; ½ mile from school and church (Methodist); ½ mile from cheese factory; 3½ miles from milk station. Highways, dirt roads and 2 miles macadam to Frankfort. Nearest village, Herkimer, population 9,577, distant 5¾ miles, reached by highway. General surface of farm, rolling. Altitude, about 1,100 feet. Nature of soil, clay loam. Acres that can be used as meadow, 100; acres now so used, 80; in natural pasture, 110; in timber, 10; maple, birch, beech, hemlock. Acres tillable, 80. Fruit, apple trees. Adapted to hay, oats, barley, ensilage corn, potatoes and beans. Good wire fences. House, 30x40, in fine condition; house, 25x30, good condition. Barns, 110x30; 30x40; 20x15; all in good condition. Running water in house and barns; fields watered by springs and brooks. Occupied by tenant. Reason for selling to close up estate. Price, $3,500. Terms, $1,000 down, balance long or short time mortgage. Will rent. If purchaser has property in sight, can get time for all of purchase price. Address F. M. Pierce, owner, 128 N. Main St., Dolgeville, N. Y.

TOWN OF WINFIELD

Population 1,435

No. 285.— Farm of 320 acres; located 1½ miles from West Winfield postoffice; 1¼ miles from railway station at West Winfield, on line of Richfield Springs Branch, D. L. & W. R. R.; 1½ miles from school and churches; 1¼ miles from milk station. Highways, level, crushed stone and gravel, good. Nearest city, Utica, population 80,589, distant 20 miles, reached by rail and highway. General surface of farm, 100 acres level, 70 in one meadow. Altitude, 1,235 feet. Nature of soil, clay loam. Acres that can be used as meadow, 110; acres now so used, 105; in natural pasture, 150; in timber, 35, hemlock, maple, beech, some elm and ash. Acres tillable, 100. Fruit trees, 75 apple, 10 pear, 8 plum; 100 berry bushes and 25 currant. Adapted to hay, oats, barley, ensilage corn and roots. Principally wire and some board fences in fair condition. House with 16 rooms, 30x40, with kitchen, 20x30, sixteen rooms, slate roof, 2 bath rooms, acetylene gas plant, hot water heat; also two tenant houses in good condition. Four barns, one over basement, 82x30, cement floor, silo, stables 49 cows, new milk room adjoining; one 90x28, cement floor, 50 cows, storage for grain; wagons in front, 2 box stalls; also two other large barns. House watered by storage tank cistern; barns by well; fields by stream. Occupied by owner. Reason for selling, ill health. Price, $20,000. Terms, half cash, balance mortgage. Will rent, subject to sale, on equal shares, tenant to furnish tools and horses and half the dairy. Great pastures do not feel drouth; can keep 50-cow dairy. Address Fred E. Wood, owner, West Winfield, N. Y.

JEFFERSON COUNTY

Area, 1,868 square miles. Population, 81,009. Annual precipitation, 40.38 inches. Annual mean temperature, 48.2°. Number of farms, 5,778. County seat, Watertown.

This county is located in the northern part of the state, bounded on the northwest by the St. Lawrence river and on the west by Lake Ontario. The Black and Indian rivers traverse the county affording abundant water power which has not yet been very greatly developed.

The surface is diversified with gentle undulations, abrupt terraces and deep ravines. Along Lake Ontario and the St. Lawrence river the soil is the same gravelly alluvium found near the shore of the other lake counties. Further inland the surface is generally level or rolling. On the second level, ranging from 600 to 900 feet above the lake, the surface is more rolling and the soil becomes a rich, clay loam. Southeast of this, and extending into Lewis county, the surface is hilly with deep ravines and abrupt terraces. Clay loam still predominates, but much black loam is found. A large part of the county is covered with forests of ash, oak, pine, hemlock, beech, spruce and sugar maple. The well-known Potsdam sandstone is found in this county and also extensive deposits of iron ore.

The following crops were reported: corn, shelled, 111,817 bushels; oats, 2,858,316 bushels; barley, 69,460 bushels; buckwheat, 23,499 bushels; dry beans, 21,759 bushels; potatoes, 329,253 bushels; hay and forage, 203,744 tons. The value of all farm property is $40,095,331, an increase of 27.6 per cent in ten years. The average value of improved land in the county is $43.13 per acre. Domestic animals reported: dairy cows, 58,959; horses, 17,093; swine, 18,635; sheep, 5,496; poultry, 273,110. Total production of milk, 32,881,485 gallons and the total receipts from the sale of dairy products, $3,287,056. The county is crossed in several directions by the R. W. & O. railway lines and trolley lines, giving ample transportation facilities. The Watertown Produce Exchange, the greatest cheese market in the United States, is located at Watertown, a great railroad center. Along the St. Lawrence shore are located many large hotels and cottages which accommodate the thousands of tourists who annually visit the Thousand Islands, thus a great local market is had for all farm produce. There are 347 district schools in the county and academies at Watertown and Carthage; 168 dairy stations and factories furnish nearby market for milk. There are two county fair societies, one Holstein-Friesian breeders' club, one Patron of Industry, three subordinate granges and one Pomona grange, all organized and working for agricultural interests.

TOWN OF CAPE VINCENT

Population 2,514

No. 286.— Farm of 154 acres; located 4 miles from Cape Vincent railway station, on line of N. Y. C. R. R.; ½ mile from school. Has 1 mile shore front on St. Lawrence river. Nearest city, Watertown, population 26,895, 25 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay and black loam. Acres that can be used as meadow, 30; in natural pasture, 60; in timber, 20. Acres tillable, 90. Fruit, 40 apple trees. Best adapted to hay and grain. Fences, wire and board. House, 2 stories, 20x40, with wing, good condition. Barn, 40x80, stable for 30 cows, new creamery with ice house, good condition, granary, poultry house, and hog house. Watered by St. Lawrence river. Occupied by tenant. Reason for selling, other business. Price, $1,500. Address F. L. Hall, owner, Clayton, N. Y. Will rent with option to buy.

TOWN OF ELLISBURGH

Population 3,487

No. 287.— Farm of 96 acres; located 2½ miles from Mannsville P. O., R. D. 2, and railway station on line of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches, milk station, cheese and butter factory and condensing plant. Highways, state road. Nearest village, Mannsville, population 617, 2½ miles distant, reached by highway. General surface, rolling. Altitude, 200 feet. Nature of soil, gravelly loam; acres tillable, 85; acres in timber, 7, maple. Fruit, apples, pears, plums and currants. Best adapted to corn, oats and barley. Fences, wire, in good condition. House, nearly new, 10 rooms, two stories. Barn, 36x55, basement stable. House and barn watered by well, fields by three creeks. Reason for selling, other business. Price, $3,000. Terms, $500 down, easy payments for balance. Address A. B. Schuyler, owner, Adams, N. Y. Will rent.

TOWN OF LE RAY

Population 2,540

No. 288.— Farm of 250 acres; located 3 miles from Evans Mills P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 mile from school and 3 miles from churches; 3 miles from milk station; 1 mile from cheese factory. Highways, clay and gravel. Nearest city, Watertown, population 26,895, 13 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 75; in pasture, 85; in timber, 10, maple, hemlock and basswood; acres tillable, 240. Adapted to hay, grain and dairying. Fences, wire. House, 2 stories, 24x30, with ell for kitchen. Outbuildings: hay barn, 54x30; cow barn, 36x60, with ell 36x76; new silo, 16x30; grain mill and tank; horse barn, 24x30; granary; hog house and tool house. House watered by drilled well, barns by same, fields by Indian river. Occupied by tenant. Reason for selling, age of owner. Price, $55 per acre. Terms, $3,000 down, balance on mortgage. Forty-two cows will be sold with farm at a reasonable price. Address W. H. Reese, owner, Evans Mills, N. Y.

TOWN OF LORRAINE

Population 993

No. 289.— Farm of 165 acres; located 4 miles from postoffice (R. D. No. 2) and railway station at Adams, on line of N. Y. C. & H. R. R. R.; 1 mile from school; 4 miles from churches, butter factory, milk station and condensing plant; 2 miles from cheese factory. Good highways. Nearest city, Watertown, population 26,895, distant 15 miles, reached by rail or highway. General surface of farm, rolling. Nature of soil, sandy loam with some clay. Acres that can be used as meadow, 85; number now used as meadow, 20; in natural pasture, 50; in timber, 25, maple, beech, pine, cedar and hemlock. Acres tillable, 85. Best adapted to corn, oats, buckwheat, potatoes, barley, rye, etc. Pastures well fenced, mostly new. House of 9 rooms, 30x24; ell, 18x24. Barns, 40x30 and 24x70, connected, stables for 12 cattle and 3 horses; tool shed; silo; in first class condition; milk house and new hen house. House watered by 100-foot drilled well; barns by well; fields by spring. Farm now occupied by owner. Farm not leased; possession can be given on 10 or 30 day notice. Reason for selling, other business. Price $5,000. Terms, $3,000 down and balance on mortgage at 5%, or $4,500 cash. Might rent for one year. Address Mrs. M. E. Davis, Adams, N. Y., R. D. 2.

TOWN OF LYME

Population 1,869

No. 290.— Farm of 108 acres; located 3½ miles from Chaumont P. O., and railway station, on line of N. Y. C. & H. R. R. R.; ½ mile from school; 3½ miles from churches; 3½ miles from cheese factory and milk station. This farm is located on Cherry Island, ½ mile from mainland. Nearest village, Chaumont, population 682, 3½ miles distant, reached by boat and highway. Surface of farm, nearly level. Altitude, 300 feet. Soil, clay loam. All in meadow and grain. Nice trees along shores, of elm and oak; acres tillable, 105. Fruit, few cherry trees. Adapted to hay, alfalfa, oats, corn, wheat, etc. Houses, 2 moderate sized summer cottages. Outbuildings: basement barn, 36x70; hay barn, 30x40; ice house, granary, in good condition. Watered, house, by well, fields, by Chaumont bay. This is an ideal summer home. Occupied by owner. Reason for selling, wishes money to invest in manufacturing interests. Price, $15,000. Terms, cash, or $10,000 cash, balance on mortgage. Address The Adams & Duford Co., owners, Chaumont, N. Y. Owners will rent.

No. 291.— Farm of 250 acres; located 2 miles from Chaumont P. O., and railway station, on line of N. Y. C. R. R.; ½ mile from school; 2 miles from churches; 2 miles from cheese factory and milk station. Highways, good. Nearest village, Chaumont, population, 682, 2 miles distant, reached by highway. Surface of farm, rolling. Altitude, 300 feet. Soil, clay loam and black muck. Acres in meadow, 30; in natural pasture, 220; timber cut off and ready to clear up for new land; acres tillable, 125. Adapted to hay, oats, barley, corn, potatoes, etc. Fences, wire, in good condition. No house. Barn, 30x60, in good condition. Watered, barn, by well, with windmill pump. Occupied by tenant. Reason for selling, wishes to invest money in manufacturing business. Price, $20 per acre. Terms, cash. Address The Adams & Duford Co., owners, Chaumont, N. Y. Will rent.

TOWN OF WATERTOWN

Population 1,179

No. 292.— Farm of 130 acres; located 2½ miles from postoffice at Watertown (R. D. No. 3); 2½ miles from railway station at Watertown, on line of N. Y. C. R. R.; 2½ miles from school and churches; 2 miles from butter factory; 2¼ miles from condensing plant. Highways, macadam. Nearest city, Watertown, population 26,895, distant ½ mile, reached by highway. Surface of farm, half rolling and half level. Soil, half loam, half muck. Acres that can be used as meadow, 120; acres now so used, 37; in natural pasture, 60; in timber, 10, elm, ash and soft maple. Acres tillable, 120. 22 apple trees. Adapted to corn, oats, barley and hay. Good wire fences. House, 21x26; 20x21, good condition. Barn, 38x90, with basement; shop, 12x26; shed, 24x26; hen house, 18x20. House watered by compressed air in cistern; barns by windmill; fields by well. Black river 2½ miles distant. Occupied by owner. Reason for selling, old age. Price, $10,000. Hot water heat in house. Address James M. Felt, Watertown, N. Y., Route 3, Box 96.

TOWN OF WILNA

Population 6,393

No. 293.— Farm of 200 acres; located 4 miles from Carthage, on line of N. Y. C. R. R.; 30 rods from school; 4 miles from churches and milk station; 2 miles from butter factory; ½ mile from cheese factory. Highway, state road. Nearest village, Carthage, population 3,871, 4 miles distant. General surface, level. Nature of soil, good. Acres that can be used as meadow, 150; acres now used as meadow, 125; in natural pasture, 75; in timber, 25, beech, birch, elm, maple and ash. Acres tillable, 125. Best adapted to oats, corn and hay. Fences, wire, in good condition. House, large. Outbuildings, in good condition. Watered, house by cistern; barns, by wells, and fields, by creek. Occupied by owner. Reason for selling, wishes to retire. Price, $12,000. Terms, ½ cash and remainder on mortgage. Address Lotus S. Fargo, owner, Carthage, N. Y.

No. 294.— Farm of 150 acres; located 1 mile from P. O. and railway station at Carthage, on line of Carthage & Copenhagen and N. Y. C. railroads; 1 mile from butter factory and condensing plant. Highways, state road. General surface, level. Nature of soil, good clay and muck land. Timber, enough for home use. Acres tillable, 100. Adapted to barley, oats, corn and potatoes. Fences, barbed wire. House, 32x38, good condition. Barn, 90x45. Watered, house by spring. Occupied by tenant. Reason for selling, death in family. Price, $5,000, with dairy. Address A. Fitzsimmons, owner, 33 North James street, Carthage, N. Y.

No. 295.— Farm of 103 acres; located 8 miles from postoffice (R. D. No. 2) and railway station at Carthage, on line of N. Y. C. & H. R. R.; 1 mile from school and churches; 8 miles from butter factory; 2 miles from cheese factory; 6 miles from milk station. Good highways, few hills. Nearest large village, Carthage, population 3,871, distant 8 miles, reached by highway, part state road. General surface of farm, rolling. Nature of soil, loam. Acres that can be used as meadow, 75; number now so used, 50; in natural pasture, about 40; in timber, about 8, second growth, mostly maple, poplar, white birch. Acres tillable, 75. Best adapted to oats, buckwheat, corn, peas, potatoes, gardening. Fences, part rail, part barbed and part American woven wire. House, 20x26, with wing, 18x24, in fair condition. Good barn, 18x24; good barn, 32x42, needs some repairs. House and barns watered by wells; fields by well and pond. Farm now occupied by owner. Reason for selling, owner a widow with disabled son. Price, $3,500. Terms, $1,000 down, balance $100 per year. Will rent to reliable tenant for either cash or on shares, or with option to buy to responsible people. Farm is in two parts; that with buildings contains 72 acres; 75 acres short distance from first part. Address Mrs. Carrie E. Hall, Box 42, R. D. 2, Carthage, N. Y.

TOWN OF WORTH

Population 579

No. 296.— Farm of 100 acres; located 8 miles from Adams P. O., R. D. No. 1; 1¼ miles from school; ⅛ mile from church; 2⅛ miles from cheese factory, milk station and condensing plant. Highways, good. Soil, gravel and clay loam. Acres that can be used as meadow, 95; in pasture, 40; in timber, 5. Fruit, a few apples. Fences, American wire. House, 16x24, with wing. Barn, 14x50. Watered, by 2 creeks and spring. Price, $2,000. Terms, $1,000 cash, balance to suit purchaser. Address Daniel Groves, owner, Adams, N. Y.

LEWIS COUNTY

Area, 1,288 square miles. Population, 25,947. Annual precipitation, 36.79 inches. Annual mean temperature, 45.1°. Number of farms, 3,343. County seat, Lowville.

This county is situated north of the Mohawk Valley in the north central part of the state. It is drained by the Black, Beaver, Moose and Oswegatchie rivers. The surface is hilly and broken except along the Black river which flows through the center of the county from south to north. Along this wide valley the soil is of a rich limestone formation and the surface is gently rolling with some level

Fig. 39.— View on Farm No. 303, Town of Osceola, Lewis County.

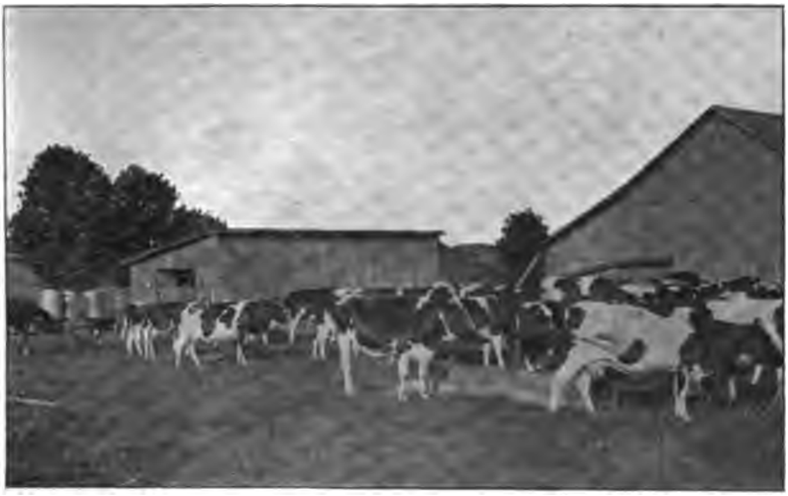


Fig. 40.— Cattle and Barns on Farm No. 303, Town of Osceola, Lewis County.

tracts. To the east of these, the land rises in abrupt broken hills to an elevation in some places of 1,200 feet above the valley. The hills are covered with forests of sugar maple, pine, spruce, birch, hemlock and other trees, and are too rough for cultivation. In the western portion of the county, the hills are mostly long, sloping ridges with fertile clay loam soils. Trenton limestone is found in parts of the county. Agriculture is the chief industry. The principal products are: corn, shelled, 12,070 bushels; oats, 867,423 bushels; barley, 17,771 bushels; potatoes. 254,802 bushels; hay and forage, 131,102 tons. Farm property reaches a total valuation of $16,288,674, an increase of 24.7 per cent in ten years. The average price of improved land per acre is $28.16. Farms report the following domestic animals: dairy cows, 34,408; horses, 8,356; swine, 10,422; sheep, 32,339; poultry, 116,656. Milk produced, 18,435,828 gallons. Total receipts from the sale of dairy products are $1,611,947. The county is thoroughly provided with transportation facilities. There are 208 district schools; 106 stations and factories where milk finds a ready market; an agricultural society which holds an annual fair; twenty-one granges and one Pomona grange. The production of cheese of all kinds is very large.

TOWN OF DENMARK

Population 2,116

No. 297.— Farm of 163 acres; 2 miles from Copenhagen P. O., R. D.. and railway station on line of C. & C. R. R.; ⅛ mile from school; 2 miles from churches, butter and cheese factory, milk station and condensing plant. Highways, state road. Nearest city, Watertown, population 26,835, 12 miles distant, reached by rail or highway. Surface of farm, part level and part slightly rolling. Altitude, 1,200 feet. Soil, clay loam. Acres in meadow, 100; in timber, 25, mostly maple and beech; acres tillable, 160. Fruit, 60 apple trees, plums and cherries. Adapted to hay, corn, oats, potatoes, etc. Fences, wire, in fair condition. House, 14 rooms, in fine condition. Barn, 42x90, with ell, 30x42; hog house, 16x24; tool house, 18x30. Watered, house, by well and cistern; barns, by spring; fields, by springs and brook. Occupied by owner. Reason for selling, ill health. Price, $8,300. Terms, $4,000 cash, balance on mortgage at 5 per cent. This price includes all stock, farming implements, hay and grain on hand. Address Henry Rogers, owner, Copenhagen, R. D. 2, N. Y.

No. 298.—Farm of 18½ acres; located 10 rods from Denmark postoffice; 3 miles from railway station at Deer River, on line of N. Y. C. R. R.; ⅛ mile from school; ¼ mile from Congregational church; 15 rods from cheese factory, and 7 miles from condensing plant. Good state roads. Nearest village, Carthage, population 3,871, distant 7 miles, reached by highway. General surface of farm, slightly rolling. Altitude, 1,150 feet. Nature of soil, black loam. Acres that can be used as meadow, 18; acres now used as meadow, 10. Acres tillable, 18½. Fruit trees, about 50 apple, 2 plum, 2 pear, some cherry. Adapted to all kinds of grain and vegetables. Wire fences in fair condition. Eleven-room house, needs painting. Barns, 36x60; ell, 32x48; silo; work shop, 16x26. House and barns watered by well and cistern. One mile from Black river. Occupied by owner. Price, $3,500, including crop except garden. Terms, $1,000 down, balance $200 per year. Address L. J. Ransier, owner, Denmark, N. Y.

TOWN OF LEWIS

Population 733

No. 299.— Farm of 150 acres; located 3 miles from West Leyden P. O., R. D. No. 1; 12 miles from railway station at Boonville, on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches and cheese factory. Highways, stone roads. Nature of soil, good. Acres that can be used as meadow, 25; in natural pasture, 125; small amount of timber, spruce. Best adapted to hay. Fences, wire. House, 22x35. Barn, 35x60. Watered, house by pump, barns, same. Occupied by owner. Reason for selling, ill health. Price, $4,000. Terms, cash. Address William Earnst, owner, West Leyden, N. Y.

No. 300.— Farm of 150 acres; located 8 miles from Constableville P. O., R. D. No. 2; 15 miles from railway station at Lyons Falls, on line of N. Y. C. R. R.; ¼ mile from school; ½ mile from churches; ¼ mile from cheese factory. Acres that can be used as meadow, 35; in natural pasture, 115. Best adapted to hay. Fences, wire. House, 24x40. Barn, 40x75. Occupied by owner. Reason for selling, other business. Price, $4,500. Terms, cash. Address Matties Kipp, owner, Constableville, N. Y.

TOWN OF LEYDEN

Population 1,663

No. 301.— Farm of 102 acres; located ¾ mile from Talcottville P. O., R. D. No. 1; 2¾ miles from railway station at Denley, on line of N. Y. C. R. R.; ¾ mile from school and churches; 1 mile from butter factory; ½ mile from cheese factory and 2¾ miles from milk station. Highways, excellent. Nearest city, Utica, population, 80,589, 35 miles distant, reached by rail and highway. General surface of farm, slightly rolling. Altitude, 1,200 feet. Nature of soil, dark loam. Acres that can be used as meadow, 33; in natural pasture, 44; in timber, 15; maple, beech, birch, hemlock and spruce. Acres tillable, 85. Fruit, 7 plum and 20 apple trees. Adapted to corn, potatoes, oats, barley and hay. Fences, mostly wire, good condition. House, 1½ stories, painted, very good condition. Outbuildings: barn, 30x40; barn, 32x46; cheese-house; other buildings and a summer milking barn with loft and stanchions for 22 cows. Watered, house by well of soft water, barns by stream near by, and fields, by stream. Occupied by tenant. Reason for selling, old age and ill health. Price, $5,400. Terms, $2,000 cash. Other buildings are a brick smoke house, hog house, sheep shed and a large valuable ice house. Address J. Bassett, owner, Talcottville, N. Y.

TOWN OF NEW BREMEN

Population 1,660

No. 302.— Tract of land of 67 acres; located 1 mile from Beaver Falls P. O. and railway station, on line of L. & B. R. R. R.; 1 mile from school, church and milk station. Highways, good. Nearest large village, Lowville, population 3,244, 8 miles distant, reached by rail and highway. This land is partly wooded and has never been tilled. Surface of farm, level. Soil, sandy loam. Adapted to potatoes, grain, fruit, pasture, etc. Price, $500. Terms to suit purchaser. There are no buildings on this tract. Is suitable place for bungalow; very fine view. Address Mrs. Clara S. Itterly, owner, Shawnee, Ohio.

TOWN OF OSCEOLA

Population 467

No. 303.— Farm of 200 acres; located 1 mile from Osceola P. O.; 12 miles from railway station at Camden, on line of N. Y. C. & H. R. R. R.; 1 mile from school, churches, butter factory and cheese factory. Highways, state road. Camden has population of 2,181. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 40; in natural pasture, 90; in timber, 40, hardwood. Nearly all tillable. Fruit, 60 apple trees. Best adapted to hay, corn and grain. Fences, nearly all new wire. House, 1½ stories, 7 rooms. Outbuildings: cow barn with basement, 40x80; horse barn, 30x40, with basement. Forty-five stanchions for cattle. Two silos and poultry house. Watered, house and barns piped from spring, fields by spring and streams. Reason for selling, other business. Price, $7,500, which includes 35 Holstein cows, milking machine, up-to-date farm machinery and tools. Terms, reasonable payment, balance on mortgage at 5 per cent. The New York Central Railroad is shortening its branch from Rome to Thousand Islands, passing within 4 miles of farm. Address O. G. Cowles, owner, Osceola, N. Y.

TOWN OF WATSON

Population 771

No. 304.— Farm of 300 acres; located 2 miles from Crystal Dale P. O. and 6 miles from railway station, on line of N. Y. C. R. R.; ¼ mile from school; 2 miles from churches and 3 miles from milk station. Highways, good. General surface of farm, level. Altitude, 1,250 feet. Soil, sandy loam. Acres that can be used as meadow, 75; in natural pasture, 100; in timber, 25, hard and soft. Acres tillable, 250. Fruit, apples, plums, etc. Adapted to all kinds of crops. Fences, wire, good. Eight-room house, good stone basement. Large frame barn; hog house, granary and ice house. House and barns watered by running water, and fields, by springs and creek. Crystal Lake, 300 feet from house. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, $3,000 cash, balance on mortgage. Address Stephen Baker, owner, Crystal Dale, N. Y.

No. 305.— Farm of 50 acres; located 6 miles from Lowville P. O. and railway station, on line of N. Y. C. & H. R. R. R.; ⅛ mile from school; ½ mile from churches and cheese factory. Highways, good. Surface of farm, level and slightly rolling. Altitude, 1,250 feet. Soil, sandy and black loam. Acres that can be used as meadow, 30; in natural pasture, 15; in timber, 5, 100 trees, sugar bush — hardwood. Acres tillable, 35. Fruit, apples, plums, etc. Adapted to all kinds of crops. Fences, good. Good frame house, 8 rooms, painted white. Barn, 30x40. House watered by well, barns by running water, fields by creek. Reason for selling, ill health. Price, $600. Terms, half cash, balance on mortgage at 5 per cent. Hardwood timber on this place to last for firewood a lifetime. Address Peter Wetmore, owner, Ilion, N. Y., G. D.

No. 306.— Farm of 46 acres; located 5½ miles from Lowville, on line of N. Y. C. R. R.; 1¼ miles from school, churches and cheese factory Highways, good. Nearest village, Lowville, population 3,244, reached by highway. General surface, rolling. Altitude 1,225 feet. Nature of soil, sandy black loam. Acres that can be used as meadow, 30; in natural pasture, 12; in timber, 4. Acres tillable, 30. Fruit, apples and plums. Adapted to general farm crops. Fences, good. House, 7 rooms. Outbuildings, barn, 26x30. Watered, house and barns by running water; and fields by creek. Occupied by owner. Reason for selling, ill health. Price, $1,650. Terms, ½ cash and remainder on mortgage. Five cows, 2 calves, 1 horse and harness, as well as some farm tools and supplies go with the farm. Address George D. Phillips, owner, Watson, N. Y.

No. 307.— Farm of 300 acres; located 8 miles from Lowville, on line of N. Y. C. R. R.; 1 mile from school and 2 miles from churches and cheese factory. Highways, good. Nearest village, Lowville, population 3,244, 8 miles distant. Reached by highway. General surface, level. Altitude, 1,250 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 100; in natural pasture, 100; in timber, 25, hard and soft wood. Acres tillable, 250. Fruit, some apples and plums. Adapted to all kinds of crops. Fences, good. House, 8 rooms in good condition. Outbuildings: basement barn, hog house, granary and ice house. Watered, house and barns by running water; fields by springs and creek. Occupied by owner. Reason for selling, death in family. Price, $7,000. Terms, $4,000 cash and remainder on mortgage at 5 per cent. Address Stephen Baker, owner, Crystaldale, N. Y.

No. 308.— Farm of 120 acres; located 5 miles from postoffice at Lowville, R. D. No. 3; 5 miles from railway station at Lowville; 1½ miles from school; 2 miles from church; 3 miles from cheese factory; 4 miles from milk station. Highways, level. Nearest village, Lowville, population 3,244, distant 5 miles, reached by highway. General surface of farm, level. Nature of soil, clay. Acres that can be used as meadow, 65; in natural pasture, 55; some pine, balsam and elm timber. Acres tillable, 70. Adapted to hay and grain. Good wire fences. Medium sized house in good condition. Barn, 40x82; ice house; granary. House and barn watered by springs; fields by creek. Black river 2 miles distant. Farm now occupied by owner. Price, $6,000. Terms, cash. Address Guy H. Packard, Lowville, N. Y., R. 3.

LIVINGSTON COUNTY

Area, 644 square miles. Population, 38,427. Annual precipitation, 36.48 inches. Annual mean terperature, 50°. Number of farms, 3,298. County seat, Geneseo.

This county is situated in the western part of the State and is intersected by the Genesee river, and is also drained by the Canaseraga and Honeoye creeks. The eastern part of the county is quite rough and the southern part generally hilly. The fertile Genesee Valley extends the entire length of the county from north to south. The county is extensively covered with forests, and there are two large lakes in the eastern part. The soil in the south is generally sandy loam, while near the center clay is predominant. Numerous salt wells are found in the northern part of the county and have been developed into a great industry. The county leads every other county of the state in the production of rock salt. The total valuation of all farm property is $28,698,858, an increase of 32 per cent from 1900 to 1910. The average price of farm land per acre is $39.40, a gain of about $5 per acre in the same decade. The domestic animals reported on the farms of the county are as follows: dairy cows, 11,501; horses, 10,051; swine, 10,701; sheep, 22,339; poultry, 165,403; milk product, 9,161,667 gallons, and the receipts from all dairy products, $787,866. There are fifteen milk stations and factories in the county. Some of the leading crops grown are: corn, shelled, 185,628 bushels; oats, 703,537 bushels; wheat, 556,421 bushels; barley, 79,012 bushels; rye, 47,981 bushels; dry beans, 229,845 bushels; potatoes, 387,495 bushels; hay and forage, 81,443 tons. The county is intersected by the Delaware, Lackawanna and Western; Erie and Pennsylvania railroads and Genesee Valley canal. These transportation lines furnish excellent accommodations to the farmers in the marketing of their products. Buffalo, Rochester, Elmira and other centers of population furnish unlimited markets for all farm products. Mineral springs of great value and popularity are located at Avon, a state normal school at Geneseo, and planing mills, salt works, flour and saw mills are located throughout the county. There are 174 district schools, 12 granges, one Pomona grange and a Union Agricultural Society, all devoted to the best interests of the farmers of the county. Vineyards and orchards are being developed with great success.

TOWN OF NUNDA

Population 2,289

No. 309.— Farm of 150 acres; located 2½ miles from postoffice and railway station at Nunda, on line of Penn. R. R.; ½ mile from school; 2½ miles from churches and milk station. Highways, hilly. Nearest city, Hornell, population 14,352, distant 28 miles, reached by railroad. General surface of farm, rolling. Soil, gravelly and dark loam. Acres that can be used as meadow, 110; in natural pasture, 20; in timber, 20, oak and maple. Acres tillable, 110. Plenty of fruit for home use. Best adapted to hay, oats, rye, buckwheat, beans. Fair wire fences. Fair house of 9 rooms. Basement barn, 32x44 House and barns watered by wells; fields by springs. Reason for selling, death of owner. Price, $40 per acre. Terms easy. Address N. A. Paine, Administrator, 104 16th Street, Buffalo, N. Y.

No. 310.— Farm of 174 acres; located 5 miles from postoffice and railway station at Nunda, on line of Penn. R. R.; ½ mile from school; 2 miles from church; 1 mile from cheese factory. Hilly highways. Nearest city, Hornell, population 14,352, distant 25 miles, reached by Erie R. R. Surface slopes eastward. Nature of soil, gravelly and dark loam. Acres that can be used as meadow, 160; in natural pasture, 6; in timber, 8, beech, maple, oak. Acres tillable, 160. Fruit, apples and small fruits. Best adapted to hay, beans, potatoes, oats. Good wire fences. Good 10-room house. Basement barn, 36x50; shed, 20x30. House watered by well; barns by stream; fields by springs. Farm now occupied by tenant. Reason for selling, old age. Price $40 per acre. Terms, easy. Will rent on shares or with option to buy. Address George L. White, owner, Dalton, N. Y.

No. 311.— Farm of 94 acres; located 5 miles from postoffice (R. D. No. 1) and railway station at Nunda, on line of Penn. R. R.; ¾ mile from school; 2 miles from church; ¾ mile from cheese factory. Hilly highways. Nearest city, Hornell, population 14,352, distant 25 miles, reached by Erie R. R. Surface of farm, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 84; in timber, 10; tillable, 84. Best adapted to hay, oats, buckwheat, beans. Wire fences in poor condition. Fair house of 8 rooms. Basement barn, 30x40; shed, 18x30. House watered by well; barns by stream; fields by spring. Farm now occupied by tenant. Reason for selling, death of owner. Price, $2,000. Terms, ½ cash. Address P. C. Halsted, Administrator, Nunda, N. Y.

MADISON COUNTY

Area, 628 square miles. Population, 41,742. Annual precipitation, 48.5 inches. Annual mean temperature, 45.6°. Number of farms, 4,042. County seat, Wampsville.

This county is located in the central part of the state, touched on the north by Oneida Lake, and Oneida Creek forms its northeast boundary. It is drained by Chenango and Unadilla Rivers and Chittenango, Canastota and Oriskany Creeks. This county is one of the leading counties for grazing and stock raising. It is fertile and productive and easily accessible to the best markets. The farms offer excellent opportunities and give good returns for intelligent effort. In the southern part the surface is mostly hilly, with broad valleys between, while in the northern part gentle undulations and stretches of level land prevail. The county is well wooded and has an abundance of pure water. The rocks which underlie are sandstone and shale. The county has quarries of gypsum, water lime, iron ore and excellent building stone. In the western part, gravelly loam is prevalent, while in the southern section, volusia silt loam predominates. The soil in the northern portion is usually rich, black and gravelly loam whereon are produced enormous crops of celery, onions, etc. The leading crops are corn, shelled, 59,682 bushels; oats, 534,837 bushels; barley, 64,808 bushels; buckwheat, 39,815 bushels; potatoes, 139,708 bushels; hops, 1,384,508 pounds; hay and forage, 129,447 tons. Alfalfa grows abundantly in the county. The average price of farm land per acre is $41.45. Domestic animals are reported as follows: dairy cows, 26,039; horses, 8,744; swine, 7,910; sheep, 2,728; poultry, 187,916. There were produced 22,381,370 gallons of milk, and the total receipts from the sale of dairy products were $2,247,721. Live stock represents 21 per cent. of the entire value of farm property in the county, making it rank third in this industry. The county is intersected by the New York Central and Hudson River; New York, Ontario and Western; West Shore; Delaware, Lackawanna and Western and the Cortland and Northern railroads; the Erie canal also passes through the northern portion. There are 199 school districts and in some of the larger villages, there are high schools and academies. Colgate University is located at Hamilton and is one of the well known universities of the east. At Morrisville is located one of the agricultural schools which are contributing so much to the agricultural power and prosperity of the state. Flour mills, breweries, knitting mills, carriage factories and canning factories are located in this county. There are seventeen agricultural organizations, thirty-five miles of state and county roads, 1,273 miles of improved highways. The principal exports of the county are hops, dairy products and pure-bred cattle. The soil and climate is especially adapted for the production of apples of the highest quality and other fruits can be grown with excellent results.

TOWN OF BROOKFIELD

Population 2,330

No. 312.— Farm of 110 acres; located 1 mile from North Brookfield P. O. and 2 miles from railway station, on D. L. & W. R. R.; 1 mile from school and churches; 1½ miles from butter factory; 2½ miles from cheese factory and 2 miles from milk station. Nearest city, Utica, population, 80,589, 28 miles distant, reached by rail and highway. Soil, very productive and in a high state of cultivation. Acres tillable, 90. Acres in timber, 20; 500 sugar maple trees; 30 bearing apple trees. Fences, barbed wire with cedar posts, good condition. House, 10 rooms, 2 stories, in good condition. Modern barns with basements and concrete floors; silo and store house, 18x30. Watered by running springs and brook; concrete reservoir which holds 100 barrels, is piped to house and barn. Reason for selling, other business. Price, $4,500. Terms, ½ cash, balance on mortgage. Address W. T. Squires, owner, North Brookfield, N. Y.

No. 313.— Farm of 120 acres; located ¼ mile from North Brookfield, on D. L. & W. R. R.; ¼ mile from school and churches; ½ mile from cheese factory and 1¼ miles from milk station. Acres tillable, 75; in timber, 40. Soil, very productive. Adapted to hops, stock raising, hay and grain. Good fences. Spring and brook water. Barn, 34x50, good condition; silo, 14x20. No house. Large pond of pure spring water on farm from which $400 to $500 worth of ice is sold each year. Price, $4,500. Terms, ½ cash. Address W. T. Squires, owner, North Brookfield, N. Y.

TOWN OF CAZENOVIA.

Population 3,867

No. 314.— Farm of 195 acres; located 4 miles from Cazenovia P. O., R. D. No. 3; 2 miles from railway station at New Woodstock, on line of L. V. R. R.; school on farm; 2 miles from churches; 2 miles from milk station and cheese factory. General surface of farm, rolling. Soil, sand and gravel. Acres that can be used as meadow, 80; in natural pasture, 80; in timber, 35, hemlock, maple and beech. Acres tillable, 80. Fruit: plums, pears, and apples. Best adapted to corn, wheat, oats, barley and cabbage. Fences, rail and wire, good condition. Seventeen-room house. Outbuildings: barn, good condition, room for 40 head of stock, water in barn, silo. House watered by well, barns by spring. Occupied by tenant. This farm has a good tenant house and is in good condition. Reason for selling, ill health and old age. Price, $12,000. Terms, easy. Address, J. M. Elmore, owner, New Woodstock, N. Y.

No. 315.— Farm of 233 acres; located ½ mile from New Woodstock P. O., R. D. No. 1 and railway station, on line of L. V. R. R.; ½ mile from school and churches; ¼ mile from butter and cheese factory and ½ mile from milk station. Highways, good. Nearest city, Syracuse, population 145,293, 22 miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,200 feet. Nature of soil, gravelly loam. Acres used as meadow, 61; in natural pasture, 96; in timber, 15, maple, beech, basswood and elm. Fruit: apples, cherries, plums, currants, raspberries, strawberries, for home use. Best adapted to wheat, corn, grain of all kinds and 25 acres of alfalfa. Fences, first class condition, 2 miles of Page woven wire. House, 15 rooms, steam heat, in good condition. Outbuildings: barn No. 1, 30x114; barn No. 2, 36x60, connected by enclosed shed 16x120, tool shed, poultry house, silo, etc. First class tenant house. House watered by running water; barns, by spring; and fields, by spring. Cazenovia Lake, five miles distant. Occupied by owner for 80 years. Reason for selling, to settle an estate. Price, $20,000. Terms, ½ cash, balance on mortgage. Address J. W. Coley estate, New Woodstock, N. Y.

No. 316.— Farm of 175 acres; located 1½ miles from Cazenovia P. O., R. D. No. 1; 1¼ miles from railway station, on line of L. V. and N. Y. C. railroads; 1 mile from school; 1¼ miles from churches; 1½ miles from butter factory and 1 mile from milk station. Highways, good. Nearest village, Cazenovia, population 1,928, 1 mile distant. General surface, rolling and level. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 150; in natural pasture, 50; in timber, 25, beech, maple, elm and ash. Adapted to hay, wheat, peas, barley and oats. Fences, mostly wire, good. House, 32x24, with wing, 14x24, new in 1916. Barns, 40x65, 20x80 and 18x24. Watered, house, by spring; barns, by spring and brook; and fields by trout brook. Cazenovia Lake, 2 miles distant. Occupied by tenant. Reason for selling, old age. Price, $7,000. Terms, liberal. Address J. L. O'Hara, owner, Cazenovia, N. Y.

No. 317.— Farm of 180 acres; located 1½ miles from New Woodstock P. O., R. D. 1, and railway station, on line of E. C. & N., a branch of Lehigh Valley R. R.; 1½ miles from High School, Protestant churches, cheese factory and milk station; 3 miles from milk condensing plant. Highways, part hilly and part level. Nearest large village, Cazenovia, population 1,928, 6 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,300 feet. Soil, loam, some stone. Acres in meadow, 100; in natural pasture, 60; in timber, 20, largely second growth hemlock. Acres tillable, 125. Fruit, apples. Adapted to oats, barley, corn, potatoes, cabbage and hay. Fences, mostly wire, nearly all in good condition. House, 31x34, with wing, 14x18, 2 stories, large enough for 2 families, good condition. New 7-room tenant house. Outbuildings: basement cow barn, 120x30; horse barn, wagon shed, silo, granary, grain or hay barn, hen house, 16x60, built three years. Watered, house, by cistern; barns, by running water and well; fields, by springs and creek. Price, $65 per acre. Terms, one-half cash. Address E. L. Buell, owner, New Woodstock, N. Y.

No. 318.— Farm of 63 acres; located 1 mile from New Woodstock P. O., R. D. No. 26, and railway station on line of Lehigh Valley R. R.; 1 mile from school, churches, cheese factory and milk station. Highways, state road. Nearest city, Syracuse, population 145,293, 22 miles distant, reached by rail or highway. General surface, part level and part rolling. Nature of soil, gravel with clay subsoil. Acres that can be used as meadow, 40; in natural pasture, 20; in timber, 4, cedar and maple. Acres tillable, 57. Fruit: apples, 48 pear, 5 plum, 15 cherry trees, currants, gooseberries and 200 Columbia raspberries. Best adapted to corn, oats, barley, cabbage and potatoes. Fences, wire, good condition. Twelve-room house in good condition, bath and steam heat, two cellars. Outbuildings: main barn 68x32 with cemented cow barn for 20 head, horse barn 24x48, granary, poultry house and pig pen. House watered by wells and cistern, barns, by running water, and fields, by brooks. Occupied by owner. Reason for selling, old age. Price, $6,300. Terms, one-half cash, balance on mortgage. Address A. P. Mead, owner, New Woodstock, N. Y.

No. 319.— Farm of 195 acres; located 4 miles from Cazenovia P. O., R. D. No. 3; 2 miles from railway station at New

Woodstock, on line of L. V. R. R.; 2 miles from high school, churches, butter factory, cheese factory and milk station and 4 miles from condensing plant. Highways, state road. Nearest village, Cazenovia, population 1,928, 4 miles distant, reached by highway. General surface, rolling. Nature of soil, sand and gravel. Acres that can be used as meadow, 80; in natural pasture, 80; in timber, 35, hemlock, maple and beech. Acres tillable, 80. Fruit: plums, pears, apples and berries. Adapted to corn, wheat, oats, barley, alfalfa and cabbage. Fences, rail and wire, good. House, 17 rooms, good condition. Outbuildings: large barn, with water in barn; barns are all connected, good silo. House, watered by well; barns, by springs, and fields, by springs. Occupied by tenant. Reason for selling, to settle an estate. Price, $12,000. Terms, ½ cash, balance on mortgage. Price includes stock and tools. Address Mrs. Amelia A. Elmore, owner, New Woodstock, N. Y.

No. 320.— Farm of 120 acres; located 1¼ miles from New Woodstock P. O. (R. D. No. 1); 1¼ miles from railway station at New Woodstock, on line of Lehigh Valley R. R.; ½ mile from school; 1¼ miles from churches; 1¼ miles from butter and cheese factories and milk station; 3 miles from condensing plant. Highways, macadam road. Nearest city, Syracuse, population 145,293, 20 miles distant, reached by rail and highway. General surface of farm, level. Soil, dark loam and gravel. Acres that can be used as meadow, 100; acres now so used, 60; in natural pasture, 40; in timber, 20, hemlock and maple. Acres tillable, 100. Fruit trees: 60 apple, 3 cherry, 1 pear, 4 plum. Adapted to corn, potatoes, cabbage, alfalfa. Wire fences in fair condition. Frame house, 28x56, in good condition. New barn, 112x40; silo, 40 ft. deep; tool and hog house, 36x20; poultry house, 30x16; cement garage. House and barn with running water; fields watered by springs. Cazenovia lake, 4 miles distant. Occupied by owner. Reason for selling, ill health. Price, $10,000. Terms, $4,000 down, remainder mortgage at 5%. Farm fully equipped with all kinds of modern machinery; 40 head stock, part thoroughbreds. Purchaser of farm can buy the above at very low figure. Address Chas. F. Miller, New Woodstock, N. Y.

TOWN OF DERUYTER

Population 1,267

No. 321.— Farm of 115 acres; located 1 mile from De Ruyter P. O. (R. D. No. 1); 1 mile from railway station at De Ruyter, on line of Lehigh Valley R. R.; 1 mile from school, churches and milk station. Highways, all good level roads. Nearest city, Cortland, population 12,367, distant 20 miles, reached by rail and highway. General surface of farm, level. Altitude, 1,200 feet. Soil, good gravelly loam, clay loam and muck. Acres that can be used as meadow, 105; acres now so used, 40; in natural pasture, 30; in timber, 8, good second growth sugar bush, other timber for farm use. Acres tillable, 105. Fruit trees, 18 apple, 30 pear. 100 strawberry plants set in 1917. Adapted to alfalfa, potatoes, hay, oats, spring wheat, all vegetables. Fences, mostly wire, condition fair and good. Good 8-room house, with bath, wash house, and cellar. Two barns; horse barn, 25x42, hip roof; hay barn, 27x52, built to cow barn, cemented, 16x65, 25 cows; silo, 15x15; engine house, 13x13; poultry house, 16x31; ice house, 10x12. House watered by well; hot and cold water from tank; barn watered by well; fields by stream. Lake Tioughnioga 2½ miles distant. Occupied by owner. Reason for selling, ill health. Price, $10,000. Terms, $8.000 cash; $2,000 mortgage. Will include all hay and grain at time of purchase; privilege of buying live stock and tools. Address O. M. Bohannon, owner, De Ruyter, N. Y.

TOWN OF EATON

Population 2,561

No. 322.— Farm of 200 acres; 2½ miles from Eaton P. O.; 3 miles from Eaton station, on line of N. Y., O. & W. R. R.; R. D. Highways, in fair condition. Adapted to corn, potatoes, dairying and grain. Acres in meadow, 75; tillable, 150; 25 acres in timber, 250 sugar maples; 3 acres of bearing apples. Watered by well, springs and brooks. 1½-story house. Large barn, silo and other outbuildings. This farm borders on Bradley Brook reservoir and is ½ mile from Hatches Lake, which is a summer resort. Price, $8,500. Terms, reasonable. Address Lewis Hopkins, owner, Lebanon, N. Y., R. D. Owner will rent on shares.

No. 323.— Farm of 362 acres; located 1½ miles from Eaton P. O., and railway station, on line of N. Y. O. & W. R. R.; 1¾ miles from school; 1½ miles from churches; 1½ miles from butter factory; 1¾ miles from cheese factory, milk station and condensing plant. Highways, hilly, but good. Nearest city, Oneida, population 9,461, 18 miles distant, reached by rail and highway. General surface of farm, rolling, part level. Altitude, 1,300 feet. Nature of soil, clay and sandy loam. Acres that can be used as meadow, 175; in natural pasture, 115; in timber, 72, maple, beech and some hemlock. Acres tillable, 200. Fruit, old apple orchard. Best adapted to corn, oats, potatoes, winter wheat and hay. Fences, stone walls and rail, good condition. House, burned, foundation stands. Outbuildings, burned, foundation of large barns stand, some outbuildings and 2 meadow barns still in existence. Watered, spring water running in house and barnyard, fields by springs and brook. Chenango river, 1 mile distant. Occupied by tenant. Price, $10,000. Terms, ½ cash. Address R. C. Tenny, owner, Pueblo, Colorado.

No. 324.— Farm of 160 acres; 2 miles from Eaton P. O., R. D. 1, and railway station, on line of N. Y. O. & W. R. R.; 1 mile from school; 2 miles from churches, butter and cheese factory and milk station; 7 miles from condensing plant. Highways, hilly, good. Nearest cities, Syracuse, 30 miles distant, population 145,293; Oneida, 12 miles distant, population 9,461, reached by rail or highway. Surface of farm, part hilly, part rolling and some level. Altitude, 1,500 feet. Soil, gravelly loam. Acres in meadow, 40; in natural pasture, 60; in timber, 20, mostly sugar maple; acres tillable, 40. Fruit, 100 apple trees, pears, cherries, plums, etc. Best adapted to oats, corn and wheat. Fences, wire, fair condition. House, 14 rooms, in good condition. Outbuildings: large barn, with basement for 40 cows; horse barn and stable; corn house, with basement for hogs. Watered, house, by well; barns, by springs piped to barn; fields, by springs and river. A branch of the Chenango river flows through this farm. Occupied by tenant. This farm is 2 miles from the State School of Agriculture at Morrisville, N. Y. Reason for selling, to settle an estate. Price, $10,000. Terms, part cash, balance on time. Address J. E. Slaught, executor, Warsaw, N. Y.

No. 325.— Farm of 29 acres; located on Main street of West Eaton; 3 miles from railway station at Eaton, on line of N. Y. O. & W. R. R. Altitude, 1,400 feet. West Eaton has a good school, 2 churches, 2 general stores, post-office, hotel, woolen manufacturing plant. Is near 3 lakes which are well stocked with great variety of fish; 3 miles from New York State School of Agriculture, 30 miles from Syracuse, population 145,293; 18 miles from Oneida, population 9,461; 5 acres truck and fruit land, 1 acre currants. House, 8 rooms. Price, $1,500. Terms, $1,000 cash, balance on mortgage. Address D. E. Darrow, owner, West Eaton, N. Y.

No. 326.— Farm of 4 acres; located ⅛ mile from West Eaton postoffice; 2½ miles from railway station at Eaton, on line of N. Y. O. & W. R. R.; ⅛ mile from school, churches; 2 miles from butter and cheese factories; 2½ miles from milk station. Highways, good. Nearest village, Hamilton, population 1,586, distant 6 miles, reached by highway. General surface of farm, rolling. Good soil. Acres used as meadow 4. Acres tillable, 4. Fruit trees, 5 plum, 7 apple, 2 pear. Adapted to potatoes, corn, peas, etc. Wire fences, good condition. House about 24x45, in excellent condition. Barn, 12x15, with basement; also store house, 15x40. House watered by running spring water; barn by spring water. Reason for selling, to close estate. Price, $2,000. Terms, $500 down, balance 5 years' time. Address Sidney Dunbar, 202 W. Liberty St., Rome, N. Y.

TOWN OF FENNER

Population 836

No. 327.— Farm of 50 acres; located 5 miles from Cazenovia P. O., R. D. No. 4; 2½ miles from railway station at Blakslee, on line of L. V. R. R.; 1 mile from school; 5 miles from Methodist church; 1 mile from butter factory, cheese factory and milk station. Highways, fair. Surface of farm, level. Soil, limestone. Acres tillable, all. Fruit, 14 apple, 2 pear, plum and cherry trees, and some berries. Best adapted to truck gardening or grain. Fences, wire, in good condition. Ten-room house, good condition. Outbuildings: new barn, 50x30, has basement with concrete floor; hog house, 16x12; corn crib, 12x8. Watered, house and barn by well; fields by spring. Occupied by owner. Reason for selling, wishes to retire.

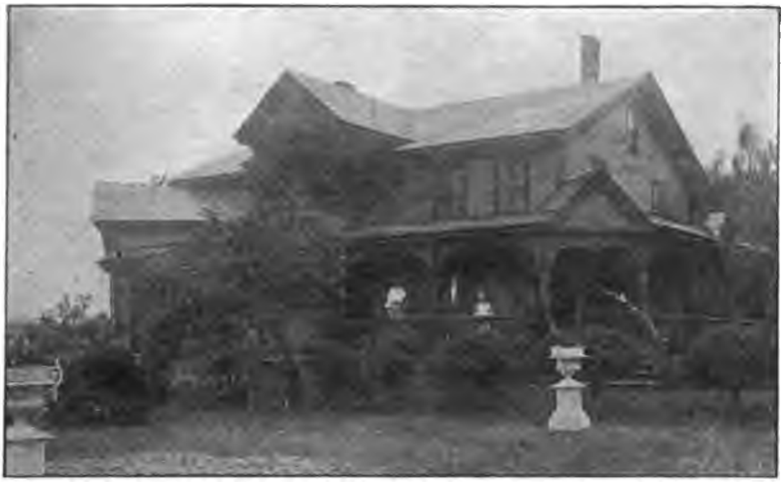


Fig. 41.— House on Farm No. 321, Town of De Ruyter, Madison County.

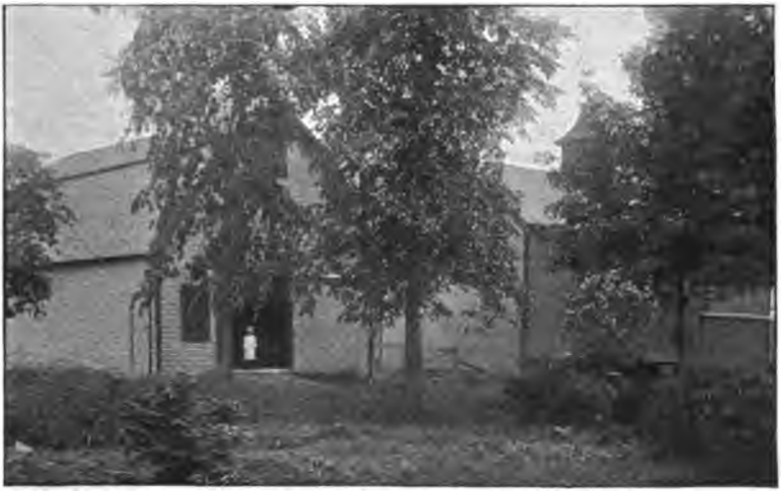


Fig. 42.— Barns on Farm No. 321, Town of De Ruyter, Madison County.

Price, $2,500. Terms, $1,000 cash, balance on mortgage. Address Thomas Kennedy, owner, Cazenovia, N. Y., R. D. No. 4.

No. 328.— Farm of 125 acres; located 2 miles from Cazenovia P. O., on line of L. V. & N. Y. C. R. Rs.; ½ mile from school; 2 miles from churches; 3 miles from butter factory and cheese factory and 1 mile from milk station. Highways, good. Nearest village, Cazenovia, population 1,928, 2 miles distant, reached by highway. General surface, level. Altitude, 1,300 feet. Nature of soil, gravel and loam. Acres used as meadow, 110; in natural pasture, 15. Acres tillable, 115. Adapted to alfalfa, hay, wheat, oats, peas and barley. Fences, mostly wire. House, 1½ stories, painted, with new roof. Outbuildings: 3 barns, 30x40, 26x36 and 34x60, all with new roofs. The largest one has basement stable with concrete floor, stanchions and box stalls. Poultry house. Watered, house by well; barns, by springs, and fields, by brooks. Occupied by tenant. Reason for selling, age and other business. Price, $7,000. Terms, easy. Address J. L. O'Hara, owner, Cazenovia, N. Y.

No. 329.— Farm of 260 acres; located 2½ miles from Cazenovia P. O., on line of L. V. & N. Y. C. R. Rs.; 1 mile from school and milk station; 2½ miles from churches; 3 miles from butter factory and cheese factory. Highways, good. Nearest village, Cazenovia, population 1,928, 2½ miles distant, reached by highway. General surface, slightly rolling. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 180; in natural pasture, 80; in timber, some maple and elm. Acres tillable, 210. Fruit, some apples. Adapted to hay, oats, barley, wheat, peas and corn. Fences, mostly wire, in good condition. House, 2 stories, frame, with 10 rooms, in good condition and also a new 8 room tenant house. Outbuildings: basement barn, 32x100, with concrete floor and stanchions; barns, 24x80, 30x40 and 20x100, and poultry house, 20x28, in good repair. Watered, house and barns, by running spring water; fields, by brooks. Occupied by owner. Reason for selling, advanced age. Price, $9,000. Terms, ⅓ cash and remainder on time. Address J. L. O'Hara, owner, Cazenovia, N. Y.

TOWN OF HAMILTON

Population 3,651

No. 330.— Farm of 91 acres; located 4½ miles from Poolville P. O., R. D. 1; 3 miles from Hubbardsville railway station, on line of D., L. & W. R. R.; ¼ mile from school; 1½ miles from churches; 3 miles from milk station. Nearest village, Hamilton, 7 miles distant, population 1,586, reached by good highway. General surface, rolling. Altitude, 1,450 feet. Nature of soil, clay loam. Acres in meadow, 55; in pasture, 20; in timber, 16, maple, beech and hemlock; acres tillable, 55. Fruit, 40 apple trees, pears, plums. Best adapted to corn, oats, potatoes and hay. Fences, wire, good condition. House, 14 rooms, good condition. Outbuildings: barn, 34x62; barn, 22x26, with basement and concrete floors, garage 20x24, silo, sugar house and poultry house, painted, good condition. House watered by artesian well; barns, by running water; fields, by spring and brook. Occupied by owner. Reason for selling, ill health. Price, $4,000. Terms, cash preferred. Address H. S. Dresser, owner, Poolville, N. Y.

TOWN OF LEBANON

Population 1,116

No. 331.— Farm of 200 acres; situated 1½ miles from Lebanon P. O. and railway station, on line of N. Y. C. R. R., R. D. 2 from Lebanon. Highways, good. Acres in meadow, 75; acres in timber, 20, mostly sugar maple, some beech and basswood. Acres tillable, 150. Fruit: pears, cherries, plums and apples. Adapted to oats, corn, barley, buckwheat, peas, potatoes, timothy, clover and alfalfa. Fences, board, woven wire and barbed wire. House, 30x40, with wing, 2 stories, in good condition. Barn, 40x111, with 25-foot posts, wing, 30x40; an ice house; milk room; a small house for hired man; a new silo; all in good condition. Watered, house, by well, pump inside; barns, spring water, inside; fields, by springs and streams. Occupied by owner. Reason for selling, old age. Price, $10,000. Terms, ⅓ or more cash, balance on mortgage at 5%. Address John Fisk, owner, Lebanon, N. Y.

No. 332.— Farm of 296 acres; located 1½ miles from Lebanon P. O., R. D. 2, and railway station, on line of W. S. R. R., Chenango branch; ½ mile from school; 1½ miles from churches and milk station; 3 miles from milk condensing plant. Highways, somewhat hilly, but good. Nearest city, Norwich, population 8,342, 18 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,200 feet. Soil, Miami stony loam. Acres in meadow, 60; in natural pasture, 100; in timber, 50, beech, maple and hemlock, first and second growth; acres tillable, 200. Fruit, 50 apple trees. Adapted to hay, corn, cabbage, fruits and dairying. Fences, woven and barbed wire, good condition. House, 12 rooms, woodshed attached, good condition, convenient for 2 families. Outbuildings: basement barn, silo, poultry house, hog house and milk house, all in good condition. Watered by well, springs and brook. Occupied by owner. Price, $6,000. Price includes farming implements. Terms, $3,000 cash, balance on mortgage. Address Mary M. Collier, owner, Earlville, N. Y., R. D. 2.

TOWN OF LENOX

Population 5,517

No. 333.— Farm of 45 acres; located 1 mile from Canastota postoffice (R. D. No. 2); 1¼ miles from railway stations at Canastota, on lines of N. Y. C. R. R. and Lehigh Valley R. R.; 1 mile from school and churches; ¼ mile from milk station; 1¼ miles from condensing plant. Highways level and good. Nearest village, Canastota, population 3.849 one mile distant, reached by highway. General surface of farm, rolling and level. Altitude, 500 feet. Nature of soil, sandy loam. Acres that can be used as meadow. 45; acres now so used, 25; in natural pasture, 10; acres tillable, 45. Fruit trees, 50 apple, 2 pear. Adapted to corn, hay, oats, onions. potatoes. Good barbed and woven wire fences. House, 30x60, in good condition. Barn, 30x60, good concrete basement, hog house, 10x18; garage, 20x20, in excellent condition. House and barns watered by well; fields by brook. Occupied by owner. Reason for selling to reduce holdings of farm lands. Price, $9,000 Terms, ¼ in cash, balance on time to suit. Will rent with option to buy. House has all modern improvements, hardwood floors, acetylene lighting, bath room, hot water heat. Address Edward G. Grems, Canastota, N. Y., R. D. No. 2.

No. 334.— Farm of 96 acres; located 7 miles from Canastota P. O. (R. D. No. 1); 4 miles from railway station at South Bay, on line of Lehigh Valley R. R.; ⅛ mile from school; ¼ mile from Congregational church; 1 mile from cheese factory and milk station; 7 miles from condensing plant. Highways, level, improved state and county roads. Nearest village, Canastota, population 3.849, distant 7 miles, reached by highway. General surface of farm, level and rolling. Altitude, 500 feet. Soil, gravelly loam. Acres that can be used as meadow, 96; acres now used as meadow, 60; in natural pasture. 30. Acres tillable, 96. Fruit trees, 75 apple, 10 pear, 6 plum, 4 cherry. Adapted to alfalfa, corn, wheat. oats, potatoes. Woven and barbed wire fences in fair condition. House, 36x32; kitchen and shed, 36x24, good condition. Barns: 127x36, good condition, 40 stanchions for cows; 2 silos, 14 x 26; hay barn, 100x30 feet. good condition; granary, 24x26; hen house, 20x20; hog house, 30x30. House and barns watered by wells; fields by Oneida lake. Farm borders Oneida lake. Occupied by owner Reason for selling, to reduce holdings of farm land. Price, $11,000. Terms, ¼ cash, balance on mortgage. Will rent with option to buy. Will also sell stock and farming tools. Address Edward G. Greme, Canastota, N. Y., R. D. No. 1.

No. 335.— Farm of 35 acres; located 2 miles from Canastota postoffice, R. D. No. 1; two miles from railway station at Canastota, on line of N. Y. C. R. R.: 2 miles from school, churches and milk station. Highways, level dirt road. Nearest village, Canastota, population 3,849, distant 2 miles, reached by highway. General surface of farm, rolling and level. Altitude, 425 feet. Nature of soil, sandy loam, clay subsoil. Acres that can be used as meadow, 24; number now so used, 20; in natural pasture, 10; number tillable, 25. Fruit trees. 10 pear. 8 cherry, 5 apple, 8 young apple. Adapted to general farm crops and berries. Wire fences in fair condition. House, 10 rooms, in good condition. Barns, 30x60. fair condition 12x20. good condition; 8x18, good. House and barns watered by wells. Farm now occupied by owner. Reason for selling, other business. Price, $3,500. Terms, $1,500 down. Price includes 2 horses. 2 cows. calf, wagons, tools, crops, etc. Address Curtis S. Bailey, Canastota, N. Y., R. D. 1.

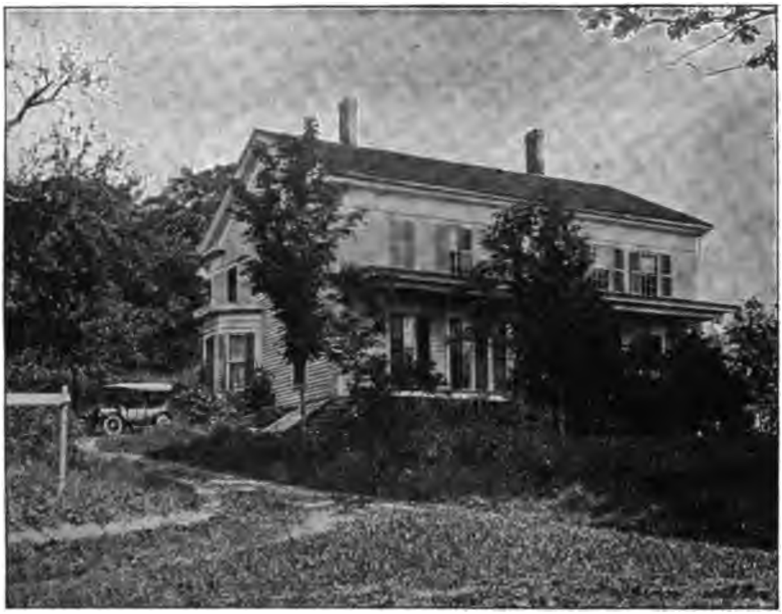


FIG. 43.— HOUSE ON FARM NO. 331, TOWN OF LEBANON, MADISON COUNTY.

FIG. 44.— BUILDINGS ON FARM NO. 332, TOWN OF LEBANON, MADISON COUNTY.

TOWN OF LINCOLN

Population 950

No. 336.— Farm of 105 acres; located 3 miles from postoffice at Canastota, R. D. No. 3; 1½ miles from Stop 26 on line of electric railway; 2½ to 3 miles from churches. Highways to above places, 2 miles state road, 1 mile dirt. Nearest city, Oneida, population 9,461, distant 7 miles, reached by rail and highway. General surface of farm, slightly rolling, mostly level. Nature of soil, mellow gravelly and clay loam. Acres that can be used as meadow, 70 to 80; acres now used as meadow, 38 to 40; in timber, 5 to 10, second growth. Acres tillable 80 to 90. Fruit, 30 apple trees, 9 pear, 5 plum, 6 cherry, 3 peach; grapes, currants and berries for family use. Best adapted to wheat, oats, corn and grass. Fair fences, mostly wire. Two-story house of 8 rooms, upper and lower hall, with cellar, in good condition. Barns, 40x80; 20x40; carriage barn; shed; hen house; tenant house with barn, good condition; silo. House watered by cistern and well; barns by tank in yard; fields by springs and streams. Farm now occupied by owner. Reason for selling, family dead and owner unable to work farm. Price, $7,000. Terms half down. Will rent for either cash or on shares to good man. Address Lillian B. Willet Smith, R. D. No. 3, Elmwood Farm, Canastota, N. Y.

No. 337.— Farm of 118 acres; located 1¼ miles from postoffice (R. D. No. 5) and railway station at Canastota, on line of N. Y. C. R. R.; 1¼ miles from school, churches, butter and cheese factories, milk station and condensing plant. Good highways. Nearest large village, Canastota, population 3,849, distant 1¼ miles, reached by highway. General surface of farm, rolling and level. Nature of soil, gravelly loam. Acres that can be used as meadow, 110; acres now used as meadow, 35; in natural pasture, 10; in timber, 8, ash, maple, beech. Acres tillable, 110. Fruit trees, 125 apple, 2 pear, 10 cherry. Adapted to all kinds of crops; can raise 100 acres alfalfa. Wire and rail fences. Good house of 12 rooms. Barns: 35x60; 30x50; 22x42; shed, 15x40; garage, 15x20. House watered by well; barns and fields by springs. Oneida lake 6½ miles distant. Farm now occupied by owner. Reason for selling, poor health. Price, $9,500. Terms, $3,000 down, balance on time. Will rent on shares or with option to buy. This farm has cleared $2,500 this year. Address James Tuttle, Canastota, N. Y.

TOWN OF NELSON

Population 1,230

No. 338.— Farm of 192½ acres; located 1 mile from Erieville P. O.; 1 mile from railway station at Erieville, on line of N. Y. C. R. R.; 1 mile from school, churches, butter factory, cheese factory and milk station. Highways, good. Nearest village, Erieville, population 202, 1 mile distant, reached by highway. Surface of farm, rolling. Altitude, 1,700 feet. Soil, loam. Acres in meadow, 70; in natural pasture, 70; balance in timber, beech, birch, maple, hemlock, basswood; acres tillable, 140. Fruit, apples and pears. Best adapted to corn, potatoes and hay. Fences, good. House, 2 stories, in good condition. Cow barn, basement, 32x80. Watered, house by well; fields, by living springs. Occupied by tenant. Reason for selling, ill health. Price, $26 per acre. Address N. E. Richards, owner, Nelson, N. Y. Owner will rent.

No. 339.— Farm of 45 acres; located 4 miles from Morrisville P. O., R. D. No. 2; 6 miles from railway station at Cazenovia, on line of L. V. and N. Y. C. R. Rs.; 1 mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, state road. Nearest city, Syracuse, population 145,293, 6 miles distant, reached by highways. General surface, rolling. Altitude, 1,200 feet. Nature of soil, good. Acres that can be used as meadow, 30; in natural pasture, 15; in timber, 5, maple, hemlock, cherry and white ash. Acres tillable, 35. Fruit, 30 apple trees. Adapted to grain, corn, potatoes, wheat and hay. Fences, wire and rail, good condition. House, 24x40, 10 rooms, in good condition. Outbuildings: barns, 54x42 and 16x24, in good condition. House watered by well, barns by well, fields by spring. Occupied by owner. Reason for selling, old age. This farm is 4 miles from State School of Agriculture at Morrisville. Price, $2,300. Terms, $1,500 cash, balance on mortgage. Address David Francis, owner, Morrisville, N. Y., R. D. No. 2.

No. 340.— Farm of 110 acres; located 4 miles from Erieville P. O., R. D. 1; 4 miles from railway station at Erieville on line of Chenango branch of

N. Y. C. & H. R. R. R.; ¾ mile from school and churches; ½ mile from butter factory and cheese factory; 4 miles from milk station. Highways, hilly, but good. Nearest village, Cazenovia, population 1,928, 7 miles distant, reached by highway. Surface of farm, rolling. Soil loam. Acres in meadow, 30; in natural pasture, 40; in timber, 40, maple, beech and hemlock; acres tillable, 69. Fruit, 30 apple, 3 pear, 4 plum trees and 1 cherry tree. Best adapted to hay, grain and dairying. Fences, wire, in good condition. House, 12 rooms, 2 stories, in good condition. Barn, 50x32, in good condition. Watered, house and barn, by well; fields, by springs and stream. Occupied by owner. Reason for selling, poor health of owner. Price, $32 per acre. Terms, $1,500 cash, balance on easy terms. Address N. E. Richards, owner, Nelson, N. Y.

No. 341.— Farm of 65 acres; located 2 miles from Erieville postoffice, (R. D. No. 1); 2 miles from railway station at Erieville, on line of West Shore R. R.; 2 miles from schools, churches, butter and cheese factories and milk station. Good highways, nearly level. Nearest village, Cazenovia, population 1,928, distant 7 miles, reached by rail. Surface of farm rolling. Loamy soil. Acres used as meadow, 35; in natural pasture, 30; in timber, 2, maple and beech. Acres tillable, 35-40. About 30 apple trees; strawberries, raspberries, blackberries. Adapted to corn, potatoes, oats, hay. Fairly good wire fences. Ten-room house, 18x22; wing, 16x24; woodshed. Barns, 36x48; 30x40, old house for hens, silo, 50 tons. House and barns watered by running water; fields by creek. Occupied by owner. Reason for selling, poor health. Price. $2,400. Terms, cash preferred. Address Amanda Mattison, Erieville, N. Y.

No. 342.— Farm of 86 2/5 acres; located 3 miles from Erieville postoffice (R. D. No. 2); 3 miles from railway station at Erieville, on line of W. S. R. R.; ½ mile from school; 3 miles from churches. butter and cheese factories, milk station, and 5 miles from condensing plant. Nature of highways, hilly and some level, but good dirt roads. Nearest village, Cazenovia, population 1,928, distant 5 miles, reached by highway. General surface of farm, hilly, rough, rolling, and some level. Altitude, 1,600 feet. Nature of soil, variety, yellow and black loam. Acres that can be used as meadow, 75; acres now so used, 60. Acres tillable, 80. Fruit trees, 20 apple, 2 pear, 8 plum. Adapted to ensilage corn, oats, barley, buckwheat, potatoes, millet. Fences, rail, cedar posts, and wire; poor condition; line fence fair. House, 8 rooms, fair condition, shingled on side, warm. Barn, 36x56, basement and stable for 20 head cattle; silo, 10x12x20, needs new cement floor and some repairs, good shape to repair. House watered by well and cistern; barn by brook, fields by spring and brook. Cazenovia lake 5 miles distant. Unoccupied. Reason for selling, old age and poor health. Price. $25 per acre. Terms, $800 down, balance on bond and mortgage. Address A. R. Warren, owner, Cazenovia, N. Y.

TOWN OF STOCKBRIDGE

Population 1,544

No. 343.— Farm of 200 acres; 1 mile from Stockbridge P. O., R. D.; 1 mile from railway station at Valley Mills, on line of N. Y. O. & W. R. R.; 1 mile from school and churches; ¾ mile from cheese factory; 1 mile from milk station. Highways, good. Nearest city, Oneida, population 9,461, 8 miles distant, reached by rail or highway. Surface of farm, level and sloping. Altitude, 300 feet. Soil, gravel and clay loam. Acres in meadow, 50; in natural pasture, 50; in timber, 20, maple, basswood, hemlock, etc. Acres tillable, 175. Fruit, 1,000 apple, 20 pear, 20 cherry, and 10 plum trees. Adapted to corn, hops, alfalfa, wheat, oats, etc. Fences, woven and barbed wire. House, 14 rooms, in good condition. Outbuildings: four barns in first class condition, stable room for 40 head of cattle, silos, milk house, poultry house, hog pen, ice house and hop house. Watered, house and barns, by running spring water; fields, by brooks and springs. Occupied by owner. Reason for selling, wish to retire. Price, $25,000. Terms, ¼ cash, balance on mortgage. Address J. E. Quackenbush, owner, Stockbridge, N. Y. Owner will rent.

TOWN OF SULLIVAN

Population 3,683

No. 344.— Farm of 160 acres; located 6 miles from postoffice at Canastota, R. D. No. 2; 6 miles from railway station at Canastota, on line of N. Y. C. R. R.; ¼ mile from school; 2 miles from church, 6 miles from butter factory and condensing plant; 3 miles from cheese factory; 4 miles from milk station. Highways to above places, 4 miles improved road, 2 miles dirt road. Nearest large village, Canastota, population 3,849, distant 6 miles, reached by highway. General surface of farm, level. Nature of soil, gravel loam and muck. Acres in meadow, 80; in natural pasture 60; in timber, 20, elm, basswood, hard and soft maple. Acres tillable, 80. Fruit: pears, apples, plums. Best adapted to grain, hay, corn, onions, potatoes. Wire fences in fair condition. Large 2-family house, needs some repairs. Horse barn, 26x52 with lean-to, 13x52; barn, 30x72, with cement stable; silo, 14x28. House and barns watered by wells; fields by stream. Oneida lake 1½ miles distant. House now occupied by tenant. Possession can be given at once. Reason for selling, other business. Price, $6,500. Terms, $2,000 cash. Address Mrs. Frank S. Swan, Canastota, N. Y., R. F. D. 2.

MONROE COUNTY

Area, 721 square miles. Population, 319,310. Annual precipitation, 37.5 inches Annual mean temperature, 49.9°. Number of farms, 5,971. County seat, Rochester.

This county lies in the western part of the state and is bounded on the north by Lake Ontario. It is considered the richest agricultural county in the state. It is intersected by the Genesee River which flows northward and enters the lake seven miles north of Rochester. The county is also well drained by several other streams.

The surface is nearly level. Clay loam soil predominates in the northwestern part of the county and a rich gravelly loam is found in the valleys drained by the Irondequoit and Genesee Rivers. Eighty-nine and three-tenths per cent. of the land area is improved. There are extensive deposits of gypsum, iron ore, water lime and Medina sandstone in the county. It ranks first in the production of apples and wheat, second in peaches and potatoes, third in currants, beans, barley and oats and fourth in strawberries and raspberries. The principal crops are corn, shelled, 511,118 bushels; oats, 1,250,976 bushels; wheat, 1,012,984 bushels; barley, 114,972 bushels; rye, 80,884 bushels; dry beans, 14,429 bushels; potatoes, 1,066,675 bushels; hay and forage, 93,427 tons. The average size of farms is 64½ acres. The total valuation of farm property is $59,764,614, an increase in value of 49.3 per cent. in ten years. The average value of land per acre is $87.92, an increase of $23.80 during the last decade. The value of improved land is $113.88 per acre. Domestic animals are as follows: dairy cows, 14,803; horses, 17,165; swine, 19,795; sheep, 11,557; poultry, 346,341; production of milk, 8,702,188 gallons. The value of all dairy products is $733,397. Rochester and Buffalo afford unlimited markets for the produce of the farmers. The county is intersected by the Erie Canal (barge canal), by three lines of the New York Central & Hudson River Railroad, also the West Shore, Buffalo, Rochester & Pittsburg, the Pennsylvania and Lehigh Valley railroads and two branches of the Erie railroad. Trolley lines extend in all directions from Rochester, a city of 248,465 inhabitants.

Monroe County is noted the country over for its nurseries. It grows annually an immense quantity of seeds, plants and trees. There are 200 district schools, excellent high schools in villages and towns, with a state normal school located at Brockport. There are 115 miles of state and county roads and 1,077 miles of improved highways. Twenty-six agricultural organizations are devoted to the interests of the farmer.

TOWN OF CHILI

Population 2,050

No. 345.— Farm of 154 acres; located 3 miles from Scottsville P. O., R. D., and railway station on line of B. R. & P. R. R.; 1½ miles from school; 2 miles from churches and 3 miles from milk station. Highways, good. Nearest city, Rochester, population 248,465, 8 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, all. In natural pasture, 20; in timber, 5, all kinds. Acres tillable, 129. Fruit, small apple orchard. Adapted to general farming or dairying. Fences fair, mostly woven wire. Two houses, 8 and 11 rooms respectively, good condition, new furnace installed. Outbuildings: 3 barns, 36x50, 36x42, 36x44, shed 24x50, also garage. Windmill. Occupied by owner. Reason for selling, other business. Price, $13,000.

Terms, $8,000 cash, balance on mortgage. Address Dugald Brooks, owner, Scottsville, N. Y.

TOWN OF CLARKSON

Population 1,657

No. 346.— Farm of 208 acres; located 3 miles from Holley P. O.; and railway station, on line of N. Y. C. R. R.; 1 mile from school; 3 miles from churches and cheese factory. Highways, improved state roads. Nearest city, Rochester, population 248,465, 21 miles distant, reached by rail and highway. General surface of farm, level and slightly rolling. Acres that can be used as meadow, 140; in pasture, 65; in timber, 25, oak, elm, ash and hickory, Acres tillable, 150. Fruit, 4 acres of apples, 12 of peaches and 1 acre of sour cherries. Best adapted to fruit, vegetables, grains and live stock. Fences, woven wire, good condition. House, brick, 12 rooms, modern plumbing. Outbuildings: gambrel roofed barn 100x35, ell 67x25, with basement under both, nearly new. Watered, house by well and cistern, barns by well, and fields by stream. Occupied by owner. Reason for selling, ill health, would exchange for smaller farm. Price, $20,000. Terms, ⅓ cash, balance on mortgage, $500 per year on the principal. Address Irving W. Crandall, owner, Kendall, N. Y.

TOWN OF GATES

Population 5,498

No. 347.— Farm of 105 acres; located 3 miles from Rochester postoffice, R. D. No. 2; one mile from railway station at Elmgrove, on line of N. Y. C. R. R.; 1½ miles from school; 1 mile from churches. Nature of highways, asphalt and macadam. Nearest city, Rochester, population 248.465, distant 3 miles, reached by rail and highway. General surface of farm, level. Limestone soil. Acres that can be used as meadow, 95; number now so used, 20; in natural pasture, 10; in timber, 10, all hardwood. Acres tillable, 95. Five acres of apples. Adapted to grain, hay, corn, potatoes. Stone and wire fences. Seven-room brick house in good condition. Grain barn, 90x34 feet; cow barn, 20x70 feet; milk house; ice house; tool shed. House watered by well; barns by windmill. Erie canal 2 miles distant, Lake Ontario 12 miles; Genesee river 5 miles. Farm now occupied by owner. Price, $130 per acre. Terms, half cash. Address Albert Unger, owner, Spencerport, N. Y., Lyell Road.

TOWN OF IRONDEQUOIT

Population 4,603

No. 348.— Farm of 75 acres; located 1 mile from postoffice; ½ mile from railway station on trolley line; 1½ miles from school and churches. Improved road. Nearest city, Rochester, population 248.865, distant 2 miles. Surface of farm, rolling. Nature of soil, sandy loam. All can be used as meadow; acres in natural pasture, 10. Acres tillable, all. Six acres of apples, 2 of pears, peaches; asparagus bed. Soil adapted to anything. Good fences. House of 8 rooms, water. lights, good condition. Large barn with cellar for cattle. House and barn watered by spring. Occupied by owner. Reason for selling, owner wishes to retire. Price, $250 per acre. Terms, cash. Three good houses on premises. Address Isaac Buyck, owner Irondequoit, N. Y.

MONTGOMERY COUNTY

Area, 396 square miles. Population, 61,030. Annual precipitation, 36.95 inches. Annual mean temperature, 49.3°. Number of farms, 2,189. County seat, Fonda.

This county is situated in the eastern part of the state in the Mohawk Valley which river traverses the county through its center from west to east. It is also drained by the Schoharie River. Most of the surface is undulating interspersed with level stretches, but the long and fertile valley of the Mohawk is level. The soil in this valley is a rich black loam with areas of gravelly loam. In the rolling lands in the southern part of the county, limestone and black slate are much in evidence, giving high adaptation to pasturage. Quarries of Trenton limestone and other good building stone are found in the county.

While adapted to all kinds of farming, the leading crops were: corn, shelled, 116,786 bushels; oats, 682,109 bushels; buckwheat, 101,494 bushels; potatoes, 88,210 bushels; hops, 148,329 pounds; hay and forage, 93,835 tons. Total valuation of all farm property is $15,460,574, an increase of 19.6 per cent. in ten years. Montgomery is another of the many counties of the state where the price of land should

double in value in the next decade, the present value of improved lands being $50.51 per acre and of the land alone, $26.92. Domestic animals are reported from almost every farm in the county classified as follows: dairy cows, 17,684; horses, 6,977; swine, 7,606; sheep, 1,399; poultry, 153,920; milk produced, 13,135,104 gallons; value of all dairy products, $1,277,634.

The county is intersected by the Erie canal, the New York Central & Hudson River, Fonda, Johnstown & Gloversville, and West Shore railroads. Electric lines also connect Fonda, Johnstown, Gloversville and Amsterdam with Albany, Schenectady and Troy. Amsterdam, the metropolis of the county, has a population of 34,319, contains two academies, large carpet mills, knitting mills and other industries. There are ample home markets for garden truck, fruit and other products of the farm. There are 109 district schools, 11 agricultural societies and organizations, 70 miles of state and county roads and 635 miles of other improved highways.

TOWN OF GLEN

Population 2,065

No. 349.— Farm of 250 acres, located 3 miles from Glen P. O., R. D.; 3½ miles from railway station at Auriesville on line of W. S. R. R.; 1½ miles from school; 3 miles from churches and milk station. Nearest city Amsterdam, 8 miles distant, population 34,319, reached by rail and highway. General surface, rolling and level. Nature of soil, black slate loam. Acres in meadow, 200; in pasture, 28; in timber, 20, red and white oak. Acres tillable, 200. Fruit for family use. Adapted to wheat, barley, oats, alfalfa and clover. Fences, wire, in fair condition. House, 25x30, fair condition. Outbuildings: barn 36x80 with basement, hay barn 28x 80 with 20-ft. posts. All new. House watered by well, barns by running water, fields by brook. Occupied by tenant. Reason for selling, ill health. Price, $15,000. Terms, ½ cash. Address E. J. Bell, owner, Fultonville, N. Y. Will rent on shares.

No. 350.— Farm of 152 acres; located 5 miles from Fultonville P. O., R. D. No. 1; 4 miles from railway station at Randall, on line of W. S. R. R.; ½ mile from school; 2 miles from church; 2 miles from butter factory; ½ mile from cheese factory; 5 miles from milk station and condensing plant. Highways, good. Nearest village, Fultonville, population 955, 5 miles distant, reached by highway. General surface, smooth and a little rolling. Nature of soil, loam mixed with clay. Acres that can be used as meadow, 125; in timber, 22, beech, maple, hemlock and ash. Acres tillable, 125. Fruit, 30 plum and 35 apple trees. Best adapted to hay, oats and corn. Fences, barbed wire, with white oak posts, good condition. House, 20x40 with wing 18x35, good condition. Outbuildings: good barn 32x78; cow barn 28x48; horse barn 23x52; tool house 20x36; wagon house 25x40; corn crib and hog house. Watered, house by well, barns, running water and fields same. Occupied by tenant. Reason for selling, old age. Price, $6,700. Terms, ¼ cash, balance on mortgage. Address Orville H. Hall, owner, Fultonville, N. Y.

TOWN OF MOHAWK

Population 2,575

No. 351.— Farm of 101½ acres; located 1½ miles from Johnstown post-office (R. D. No. 2); 2 miles from railway station at Fonda, on line of N. Y. C. & H. R. R. R., and F. J. & G. R. R.; ⅛ mile from school; 1½ miles from churches. Highways, good. Nearest city, Johnstown, population 10,687, distant 1½ miles, reached by rail and highway. General surface of farm, level. Altitude, 900 feet. Nature of soil, slate and clay. Acres that can be used as meadow, 94; acres now used as meadow, 83; in natural pasture, 3, part in woods; in timber, 7, hemlock, pine, beech and hickory. Acres tillable, 94. Fruit trees, 60 apple, 10 pear, and 10 plum. Adapted to wheat, corn, oats and hay. Mostly wire fences in good condition. House, board, 1½ stories, 12 rooms, fairly good. Four barns, all connected, big barn, 35x70; horse shed, 20x45; hay barn, 25x45; another hay barn, 30x40. House watered by well and cistern; barns by well; fields by wells and spring. Two miles from Mohawk river. Occupied by owner. Reason for selling, to settle estate. Price, $5,800. Terms, cash. Address Mr. Robert L. Bearcroft, Jr., Washington St., Gloversville, N. Y.

TOWN OF PALATINE

Population 2,449

No. 352.— Farm of 150 acres located 4 miles from Canajoharie P. O.; 2 miles from railway station at Sprakers, on line of the N. Y. C. railway; ⅛ mile from school; 4 miles from churches; ½ mile from butter factory, ½ mile from cheese factory, 4 miles from milk stations, 8 miles from condensing plant. Highways, good, macadam part of way. General surface, level. Nature of soil, loam, good rich soil. Acres used as meadow, 130; in timber, 20, hemlock. Acres tillable, 130. Fruit, 50 trees consisting of plums, pears, cherries and apples. Adapted to hay and grain. Fences, wire and stone wall, good condition. House, 15 rooms, good condition; built for two families. Barn, 50x60, good condition; large hog pen and corn crib. House, barns and fields watered by well. 1¼ miles from Mohawk River; 3 miles from Adirondack Mountains. Reason for selling, other business. Price, $7,000. Terms, ¼ cash. Will rent for term of years or annually with option to buy. Address J. I. Spraker, trustee, Fonda, N. Y.

TOWN OF ROOT

Population 1,327

No. 323—Farm of 192 acres; located 3 miles from Randall, on line of W. S. R.R.; 2 miles from school and churches; 2¼ miles from butter factory and cheese factory; 3 miles from milk station. Highways, dirt road in good condition. Nearest village, Canajoharie, population 2,474, 9 miles distant, reached by rail and highway. General surface, mostly level. Acres that can be used as meadow, 145; in natural pasture, 25; in timber, 18, hemlock and hardwood. Acres tillable, 145. Fruit, a few cherry and apple trees. Best adapted to hay and grain. Fences, mostly wire in fair condition. House, 12 rooms, in fair condition. Outbuildings, hay barn, horse and dairy barn. Watered, house by well and cistern; barns by well; and fields by spring. Occupied by tenant. Reason for selling, old age. Price, $3,700. Terms, ½ cash and remainder on mortgage. Address Furman Frank, Sprakers, N. Y.

NIAGARA COUNTY

Area, 504 square miles. Population, 104,550. Annual precipitation, 29.6 inches. Annual mean temperature, 48.6°. Number of farms, 4,346. County seat, Lockport.

This county is located in the western part of the state, bordering on Canada, separated by the Niagara River and the famous Niagara Falls. Its northern boundary is Lake Ontario.

The surface of the northern part of the county is quite level, but in the southern and eastern portions are found gentle undulations; more than one-half of the surface, however, is level. A rich, sandy and gravelly loam is found on a strip of land about ten miles in width, extending from the lake to the interior of the county. A strong clay loam, very productive, is found in the southern portions of the county. Niagara limestone is extensively quarried in some sections. The county is adapted to all forms of agriculture. It is especially noted as being one of the greatest counties of the country in the production of apples, pears, peaches, quinces, etc., producing these in enormous quantities from orchards kept in the highest state of cultivation. In crops there were produced 383,727 bushels of shelled corn; 814,055 bushels of oats; 673,088 bushels of wheat; 60,312 bushels of barley; 50,245 bushels of dry beans; 202,166 bushels of potatoes, and 81,073 tons of hay and forage. The total value of farm property is $39,665,809, an increase of 69 per cent. in ten years. This increase is exceeded by only one county in the state. The average value of improved lands, including buildings, is $111.12 per acre and the average value of farm land per acre is $74.85, an increase of $29.15 per acre in the last decade. The county reports dairy cows, 10,647; horses, 11,926; swine, 16,452; sheep, 11,321; poultry, 253,693; production of milk, 6,098,086 gallons, amounting to $448,356. Buffalo with its nearly half a million inhabitants, only twenty-five miles from the center of the county, furnishes ample market for products. The county is traversed by the Erie Canal and several important railroads and electric lines. The city of Niagara Falls contains many large manufacturing establishments and hotels. Lockport contains six flour mills and numerous saw mills. There are 155 district schools in the county, which with the many high schools, De Veaux College and Niagara University furnish exceptional educational advantages for the students. Eight agricultural organizations are devoted to the best interests of the farmer. The county has 62 miles of state and county roads and 387 miles of improved highways. The county ranks third in the production of wheat and fourth in corn.

TOWN OF PORTER

Population 2,504

No. 354.—Farm of 96 acres; 3½ miles from Ransomville P. O., R. D. 24 and railway station on line of R. W. & O. R. R.; ¾ mile from school; 3½ miles from churches and milk station. Highways, good. Nearest large village, Ransomville, population 700. Surface, level. Soil, clay loam. Acres in timber, 8, beech and maple; acres tillable, 88. Fruit, 2 acres of pear, 14 acres of apple trees. Farm is on shore of Lake Ontario. House, 9 rooms, new. New barn. Watered by wells. Occupied by tenant. Reason for selling, owner nonresident. Price on application. Address T. E. Lockhart, owner, Troy, N. Y.

ONEIDA COUNTY

Area, 1,196 square miles. Population, 167,331. Annual precipitation, 44 inches. Annual mean temperature, 47.9°. Number of farms, 6,929. County seat, Utica.

This county is centrally located and is bounded on the southwest by Oneida Creek and Oneida Lake. It is drained by the Mohawk and Black Rivers and by Oriskany, Fish and West Canada Creeks. In the region around and extending east of Oneida Lake, the surface is level. The hills of the northern part are in long, broad ridges, elevation from 200 to 600 feet. The soil in this section is a sandy and gravelly loam, very productive. In the low hills near the valley, clay loam is found, while on the higher elevations of the northeastern part, gravelly loam predominates. Among the leading minerals of the county are gypsum, iron ore and hydraulic limestone. Oneida is one of the leading farm counties of the state, some of the principal crops being corn, shelled, 97,461 bushels; oats, 829,745 bushels; barley, 40,669 bushels; buckwheat, 27,604 bushels; potatoes, 438,836 bushels; hops, 1,804,878 pounds; hay and forage, 195,449 tons. The total value of farm property is $38,437,991, an increase of 44.1 per cent. in ten years. The average price per acre of improved land throughout the county is $42.81. The county reports 54,184 dairy cows; 15,473 horses; 16,349 swine; 4,819 sheep; 323,161 poultry. There are also reported about 30,000 head of cattle, exclusive of dairy cows. There were produced 35,045,439 gallons of milk and the total receipts from all dairy products were $3,401,563. There are 169 milk stations located in the county. Oneida county is intersected by the Erie and Black River Canals and by the New York Central & Hudson River; Delaware, Lackawanna & Western; Rome, Watertown & Ogdensburgh, and West Shore railroads, all of which center at Utica. The cities of Utica and Rome furnish ample markets, and New York City is a ready market for all export products. There are 358 district schools and at Clinton is located Hamilton College, a well-known institution of high character. There are 125 miles of state and county roads and 2,100 of improved highways; also 22 agricultural societies to assist the farmer with his work. The county ranks third in hops, in the production of hay and forage and in the production of milk.

TOWN OF ANNSVILLE

Population 1,450

No. 355.— Farm of 120 acres; 8 miles from Camden P. O., R. D., and railway station, on line of N. Y. C. & H. R. R. R.; 1½ miles from school; 2½ miles from church; 1½ miles to cheese factory. Highways, fair. Nearest village, Camden, population 2,181, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, 900 feet. Soil, gravelly loam. Acres in meadow, 25; in natural pasture, 25; in timber, 70, hemlock, spruce, ash, beech, maple and birch. Acres tillable, all but woodland. Fruit, 24 apple and 8 plum trees. Adapted to potatoes, corn, oats and buckwheat. Fences, wire and stone, in fair condition. House, 22x28, needs some repairs, with wing, 16x16, unfinished, and woodshed, 16x18. Outbuildings: basement barn, 30x40; hog pen, 15x25; corn house, 12x20; poultry house, 12x16, fair condition. Watered, house by springs, barns and fields by springs. Occupied by owner. Reason for selling, ill health. Price, $3,500. Terms, cash. Address, M. L. Stanford, Camden, R. F. D. No. 5, N. Y.

No. 356.— Farm of 60 acres; located 3 miles from Point Rock postoffice; 10 miles from railway station at Blossvale, on line of N. Y. C. R. R.; 3 miles from churches and cheese factory. Good highways. Nearest city, Rome, population 21,926, distant 30 miles, reached by rail and highway. Surface of farm rolling. Altitude, 1,200 feet. Nature of soil, sandy loam. Acres in natural pasture, 20; in timber, 40, hardwood, beech, birch and maple. Adapted to corn, oats, buckwheat, potatoes. Fences, poor. No buildings. Fifteen miles from Oneida lake. Price, $200. Terms, cash. A new railroad is being built near this property, and station will probably be located 2 miles away. Address Silas W. Ferguson, owner, Worcester, N. Y.

TOWN OF AVA

Population 659

No. 357.— Farm of 330 acres; located 4½ miles from Boonville P. O., R. D. No. 4; 5 miles from railway station at Boonville, on line of N. Y. C. R. R.; ⅛ mile from school; 4½ miles from churches; 2 miles from butter and cheese factory and 5 miles from milk station. General surface, level to rolling. Altitude, 1,300 feet. Nature of soil, slate loam, good. Acres that can be used as meadow, 125; acres now used as meadow, 110; in natural pasture, 200; in timber, 30, hard wood. Acres tillable, 200. Adapted to oats, corn, hay and potatoes. Fences, wire, fairly good. House, 30x30, 2 story frame, painted. Outbuildings: cow barn 36x100, with basement and concrete floors; stanchions for 50 to 60 cows; horse barn 30x40, with basement for hogs. Watered, house by pump; barns, same and fields by running stream. Occupied by tenant. Reason for selling, to close an estate. Price, $10,000. Terms, $2,000 cash, balance on mortgage. Price includes 30 to 40 head of stock, hay, etc. Address B. A. & A. C. Capron, owners, Boonville, N. Y.

TOWN OF FLORENCE

Population 970

No. 358.— Farm of 85 acres; located 8 miles from Camden P. O., R. D. No. 4, and railway station on line of R. W. & O. R. R.; ½ mile from school, churches, butter factory and cheese factory and 8 miles from milk station. Highways, hilly. General surface of farm, rolling. Altitude, 700 feet. Nature of soil, gravelly loam. Acres used as meadow, 25; in natural pasture, 40; in timber, 20, hard wood, mostly second growth. Acres tillable, 45. Fruit, 12 apple trees, currants and raspberries. Adapted to corn, potatoes, oats and hay. Fences, stone and wire, good condition. Nine room house and wood shed. Outbuildings: cow barn 26x50, good condition, horse barn 22x30, good condition. House watered by well, barns by stream, fields by trout stream. Occupied by owner. Reason for selling, old age. Price, $2,500. Terms, $1,500 cash, balance on mortgage. Price includes 7 cows, 3 head of young stock, poultry and farm tools. Address J. H. Stanford, owner, Camden, N. Y.

No. 359.— Farm of 117¾ acres; located 3½ miles from Camden P. O., R. D. No. 5 and railway station, on line of N. Y. C. & L. V. R. Rs.; ¼ mile from school; 1 mile from church; 3½ miles from butter factory; ¼ mile from cheese factory and 3½ miles from milk station. Highways, crushed stone road, good. General surface, rolling, greater part level. Altitude, 900 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 75; in natural pasture, 25¾; in timber, 17, hardwood, some hemlock. Acres tillable, 75. Fruit, 50 apple and a few plum and pear trees. Adapted to potatoes, oats, buckwheat, corn, beans, etc. Fences, mostly wire, good condition. House, 10 rooms, nearly new, water and sink in kitchen, hard wood finish. Outbuildings: concrete basement barn 30x40; 2 good hog houses; wagon house; poultry house, etc., good condition. Watered, pump in house, fields, by springs and creek. Occupied by owner. Reason for selling, death in family. Price, $3,700. Terms: Mortgage, $2,450, 5 per cent; $800 cash, balance on easy terms. Mrs. N. L. Hoover, owner, Camden, N. Y., R. D. No. 5.

TOWN OF FLOYD

Population 702

No. 360.— Farm of 203 acres; located 2½ miles from Holland Patent P. O., R. D. No. 1, and railway station, on line of U. & B. R. line of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches; 4 miles from butter factory; 2 miles from cheese factory; 2½ miles from milk station and condensing plant. Highways, good dirt road. Nearest city, Utica, population 80,589. 15 miles distant, reached by rail and highway. General surface, level, sloping toward south. Altitude, 1,030 feet. Nature of soil, good clay loam. Acres that can be used as meadow, 100; in natural pasture, 75; in timber, 40, hemlock, maple, beech, birch, etc. Acres tillable, 125. Fruit, 56 apple trees, pears, plums and cherries. Adapted to potatoes, oats, barley, peas and corn.

Fences, woven and barbed wire, in good condition. House, 18 rooms, hot water furnace, in good condition. Outbuildings: barns, 30x60, 25x50, 26x40; poultry house and granary, 36x16; milk and ice house, 16x24. House watered by running spring, barns by the same, fields by springs and brooks. Occupied by owner. Reason for selling, other business. Price, $12,000. Terms, $4,000 cash, balance on easy payments. There is to be a state road within ½ mile and a county road to connect. Address A. J. Kirkland, owner, Holland Patent, N. Y.

No. 361.— Farm of 163 acres; located 4 miles from Holland Patent; 3½ miles from Stittville, on line of N. Y. C. R. R.; ¼ mile from school and cheese factory; 4 miles from churches, milk station and condensing plant. Highways, dirt and state road. Nearest city, Rome, population 21,926, 8 miles distant, reached by rail and highway. General surface, quite level. Nature of soil, clay loam. Acres that can be used as meadow, 75; in natural pasture, 88. Acres tillable, 95. Adapted to hay, corn, oats and potatoes. Fences, wire and board, in fair condition. House, 30x35 with wing 20x25. Outbuildings: dairy barn 45x65, in fair condition. Watered, house, by well; barns, by running water; fields, by creek. Occupied by tenant. Reason for selling, other business. Price, $4,300. Terms: $1,000 cash and remainder on mortgage. Address Lilian M. Potter, owner, Holland Patent, N. Y. Owner will rent.

TOWN OF LEE

Population 1,313

No. 362.— Farm of 202 acres; located 2½ miles from Lee Center P. O., R. D., stage to Point Rock and Rome; 10 miles from railway station at Rome on line of N. Y. C. R. R.; ⅛ mile from school; 2½ to 4 miles from churches; 2½ miles from canning factory; ½ mile from cheese factory. Highways, good. General surface, slightly rolling. Altitude, 700 ft. Nature of soil, black muck and sandy, good. Acres in meadow and cropping, 75; in natural pasture, 125; in timber, none. All tillable. Fruit, apples, pears, grapes and plums. Adapted to hay, corn, oats and canning peas. Fences, barbed wire and stone wall. House, 13 rooms, in good condition. Outbuildings: barn No. 1, 45x70; No. 2, 30x50; horse barn, 30x50; hay house, 20x42, and other buildings, in good condition. House watered by well in house, barns by running water in yard, fields by creek and never failing spring. Occupied by tenant. Reason for selling, to close an estate. Price, $6,000. Terms, cash preferred or would take mortgage for 50% of selling price. On line of Rome & Osceola R. R., now building, with station at Lee Center and prospects of milk station on farm. Address C. H. Zimmer, executor D. C., Constableville, Lewis Co., N. Y.

TOWN OF MARCY

Population 1,260

No. 363.— Farm of 112½ acres; located 3 miles from Marcy P. O., R. D. 2, and railway station on line of Black River R. R.; ¾ mile from school; 2½ miles from churches; 4 miles from milk condensing plant; 3 miles from milk station. Highways somewhat hilly but good. Nearest city, Utica, 5 miles distant, population 80,589, reached by rail or highway. Surface of farm, part hilly and part level. Good soil. Acres in meadow, 56; in natural pasture, 50; in timber, 6, beech, birch, maple, ash, elm and hemlock. Acres tillable, 70. Fruit, 24 apple trees, also pears, plums, cherries, grapes and currants. Adapted to hay, corn, oats, potatoes, etc. Fences, wire, good condition. House, 8 rooms, old but in good condition, woodshed attached. Outbuildings: barn, 26x40; barn, 30x54, shed attached; store house, 18x24, with hog house, 20x24 annexed, in fair condition. Watered, house, by wells; barns, by creek; fields, by creek and springs. Occupied by owner. Reason for selling, other business. Price, $5,000. Terms, cash or part cash, balance on mortgage. Address Mrs. Margaret J. Jones, owner, Marcy, N. Y., R. D. 2.

No. 364.— Farm of 142½ acres; located 1 mile from Marcy postoffice (R. D. No. 1); 1 mile from railway station at Marcy, on line of Black River R. R.; ½ mile from school and church; 1 mile from milk station. Highway, good state road. Nearest city, Utica, population 80,589, distant 5 miles, reached by rail and highway. Surface of farm level. Good black heavy soil. Acres used as meadow, about 60; in timber, 25, all kinds. All tillable but timber land. Fruit trees, 25. Adapted to hay, oats, potatoes, corn, cabbage, etc. Barbed wire fences in good condition. House of

11 rooms, excellent condition. Cow barn 90x30 feet; large hen house; hog pen; horse barn, has cement floor; carriage barn; corn house. House watered from inside. Mohawk river about 3 miles away. Occupied by owner. Reason for selling, farm too large for owner to work because of age. Price, $4,500. Terms, cash, or will take some mortgage. Milk dealer comes for milk about ¼ mile from farm. Near trolley and bus lines. Address Philip M. Nusbaum, owner, Marcy, N. Y.

TOWN OF MARSHALL

Population 1,814

No. 365.— Farm of 72 acres; located 3 miles from Waterville P. O., R. D. No. 1 and railway station, on line of D. L. & W. R. R.; ½ mile from school; 2 miles from churches and milk station. Highways, good. Nearest city, Utica, population 80,589, 16 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,361 feet. Nature of soil, sandy loam. Acres in meadow, 12; in natural pasture, 20; in timber, 12, variety, mostly young trees. Acres tillable, 40. Fruit, 30 apple, 2 pear, 2 crab apple and one young cherry trees, mostly snow apples. Adapted to hay, hops and potatoes. Fences, wire, rail and stone wall. House, 1½-stories; 11 rooms, hot and cold water and bath-room. Outbuildings: dairy barn, 30x68, 9-foot stone basement with concrete floor, and old hop house. Silo, 16x24. Occupied by owner and tenant. Reason for selling, to settle an estate. Price, $7,000. Terms, one-half cash. Water supply inexhaustible, well, drilled 120 feet in solid rock, distributed to house and barn by compressed air pressure. Complete septic tank sewage system. Good cellars, 2½ H. P. gasoline engine for pumping water into air pressure tank, can be used for other farm work. Address Miss Anna Lenggenhager, owner, Waterville, N. Y., R. D. No. 1. Will rent with option to buy.

TOWN OF PARIS

Population 3,018

No. 366.— Farm of 200 acres; 10 rods from post office; 100 rods from railway station on line of D. L. & W. R. R.; 20 rods from school; 15 rods from church; 1 mile from milk station; 8 miles from milk condensing plant. Highways, state road. Surface of farm, level and rolling. Altitude, about 1,200 feet. Soil, gravelly and sandy loam. Acres in meadow, 40; in natural pasture, 10; in timber, 1; acres tillable, 190. Fruit, 3 acres in apples. Best adapted to hops, potatoes, dairying, etc. Fences, wire, good. House, 2½ stories, 16 rooms, bath and toilet on 2 floors, laundry, running spring water, hot and cold water, all city improvements. Outbuildings, in perfect repair, room for 75 head of cattle. Watered by never-failing springs. This farm is 100 rods from Sauquoit Creek. This property is 12 miles from city of Utica on state road. Three tenant houses. Large house was remodeled 6 years ago at cost of $4,500. Occupied by owner. Reason for selling, failing health and advanced age of owner. Price, $20,000. Terms, ½ cash. Address J. W. Risley, owner, Cassville, N. Y.

TOWN OF VERONA

Population 3,752

No. 367.— Farm of 134 acres; 3½ miles from Verona station on lines of N. Y. C. and O. & W. R. Rs.; R. D. 2 from Durhamville; 5 rods from school; ½ mile from churches; 1 mile from creamery; 3½ miles from milk station. Highways, in good condition. Nearest city Oneida, population 9,461, 5½ miles distant, reached by highway. Soil, sand and gravelly loam and muck. Acres in meadow, 50; tillable, 110; natural pasture, 52; timber, 2, maple and ash, second growth. Fruit, pears, plums and apples. Adapted to hay, corn and oats. Fences, wire, in good condition. House, 2 stories, in good condition. Cow barn, 36x80, 20-foot posts, with 7-foot basement, pine siding, reshingled in 1905 with Washington red cedar shingles; horse barn and wagon house, 36x50, pine siding, slate roof; hog house and poultry house with basement, 20x30, 16-foot posts, 2 floors, used for storage; silo, 20x21x21; cow barn with basement above ground; 2 new poultry houses; all floors in barns and hog house concrete. House built in 1882, well painted, tin roof, concrete cistern under kitchen, 10x10, and 8 feet deep; furnace heat. There is also on the place a shop or tool house, 20x30, 16-foot posts and pine siding; ice-house, wood and store house, 18x20, 14-foot posts and pine siding. All buildings newly painted. Farm will keep from 30 to 35 head of stock and 4 horses. Occupied by owner. Reason for selling, old age. Price, $10,000. Terms, ½ cash, balance on mortgage. Address Jerome A. Jackson, owner, Durhamville, N. Y.

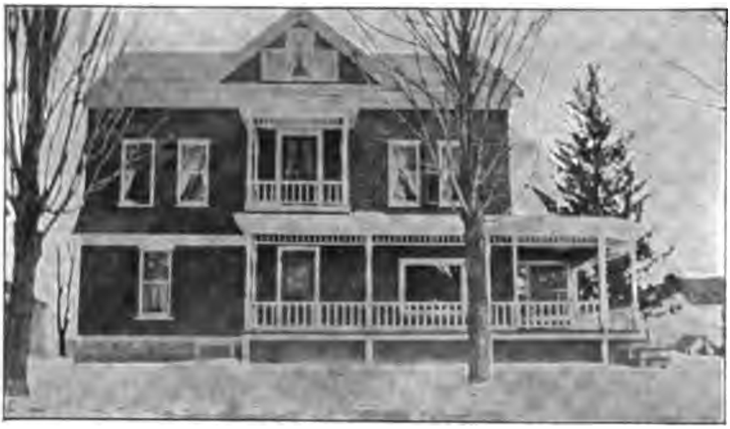


FIG. 45.— BUILDINGS ON FARM NO. 366, TOWN OF PARIS, ONEIDA COUNTY.

No. 368.— Farm of 31 acres; located 1½ miles from Verona P. O.; 2 miles from Verona Station, on line of N. Y. C. R. R.; ¼ mile from school; 1½ miles from churches and cheese factory and 2 miles from milk station. Highways, good. Nearest city, Rome, population 21,926, 6 miles distant, reached by rail and highway. General surface, level. Altitude, 500 ft. Nature of soil, good. Acres that can be used as meadow, nearly all; now used as meadow, 20. Acres tillable, nearly all. Fruit, 25 apple, 4 pear, 4 plum, 2 cherry trees, grapes and raspberries. Adapted to hay, oats, corn, wheat, potatoes and alfalfa. Fences, wire, in fair condition. House, 10 rooms, 22x30 with wing 18x20. Outbuildings: basement dairy barn, horse barn attached, tool shed, wagon house and smoke house. Watered, house and barns by well. Occupied by owner. Reason for selling, wants larger farm. Price, $3,400. Terms, $1,600 cash, balance on easy terms. Price includes eight head of stock, team, hay and farming tools. Address A. A. Preller, owner, Verona, N. Y.

No. 369.— Farm of 160 acres; located 5 miles from Durhamville; 4 miles from Verona on line of N. Y. C. R. R.; ½ mile from school and cheese factory; ¾ mile from churches and butter factory and 4 miles from milk station. Highways, state road. Nearest city, Oneida, population 9,461, 8 miles distant, reached by highway. General surface, level. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, 50; in timber, 10, elm, ash and maple. Acres tillable, 130. Fruit, about 12 apple trees. Adapted to hay, grain and general crops. Fences, wire, in good condition. House, 14 rooms. Outbuildings, large hay, horse and dairy barn. Watered, house and barns by well; fields by creek. Occupied by owner. Reason for selling, other business. Price, $8,500. Address D. K. Eames, owner, Canastota, N. Y.

No. 370.— Farm of 24½ acres; located 1 mile from Durhamville P. O., R. D. No. 2, and railway station, on line of N. Y., O. & W. R. R.; 1 mile from school; 1 mile from churches; 4 miles from butter factory and milk station. Nearest city, Oneida, population 9,461, 2½ miles distant, reached by rail and highway. General surface, rolling. Nature of soil, dark sandy. Acres that can be used as meadow, all. All tillable. Fruit, 3 pear, 2 cherry, 3 plum and about 30 apple trees, all young. Asparagus bed, 5x90 feet. Adapted to all kinds of crops. Fences, barbed wire, good condition. Sixteen-room house, 40x28, good condition, wing 27x16. Outbuildings: barn, 32x24, with leanto, 32x14; poultry house, hog house, 12x30, and 3 small brooder houses. House and barns watered by well. Occupied by owner. Reason for selling, ill health. Price, $3,000. Terms, cash. $400 may remain on mortgage. Address Charles Collier, owner, Durhamville, N. Y.

No. 371.— Farm of 339 acres; 5 miles from Durhamville P. O., R. D. 2; 2½ miles from railway station at State Bridge on line of N. Y. O. & W. R. R.; 2½ miles from railway station at Sylvan Beach on line of L. V. R. R.; ¾ mile from school; 2 miles from church; 1 mile from cheese factory; 2½ miles from condensing plant. Highways, level. Nearest city, Oneida, population 9,461, 7 miles distant, reached by rail and highway. Surface of farm, level and rolling. Soil, sandy loam and clay. Acres in meadow, 100; in natural pasture, 175; in timber, 50, maple, elm and ash; acres tillable, 200. Fruit, apples, cherries and plums. Adapted to hay, corn, oats and buckwheat. Fences, woven wire, barbed wire and rail, good condition. House, 7 rooms, fair condition. Outbuildings: barn, 40x60, with basement; barn, 20x70; corn house; hog house; poultry house and silo, 16x24, good condition. Watered by well and creek. This property is 2½ miles from Sylvan Beach. Occupied by owner. Reason for selling, old age. Price, $8,000. Address Edgar S. Bennett, owner, Durhamville, N. Y.

No. 372.— Farm of 145 acres; located 1 mile from postoffice at Verona; 1 mile from railway station at Verona, on line or N. Y. C. R. R.; ¼ mile from school and churches; 1 mile from butter and cheese factories, and milk station. Highway, state road. Nearest city, Oneida, population 9,461, distant 5 miles, reached by highway. Surface of farm, rolling. Nature of soil, Ontario loam. Acres that can be used as meadow, 125; acres now used as meadow, 80; some timber. Adapted to dairying; hay, grain, vegetables, corn. Wire fences. Large house, 10 bed rooms. Barn, 120x40; new glazed tile silo, 16x32. House watered by well;

barn by running water. Oneida lake 8 miles distant. Occupied by owner's son. Reason for selling, old age of owner. Price, $16,000. Terms half or all cash. Address Joseph Nunn, 27 Liberty St., Utica, N. Y.

TOWN OF WESTERN

Population 1,150

No. 373.— Farm of 74 acres; located 7 miles from Remsen P. O., on line of Black River R. R.; ¼ mile from school; 1 mile from churches, butter factory and cheese factory; 7 miles from milk station and 8 miles from condensing plant. Highways, hilly but good. Nearest city, Rome, population 21,926, 12 miles distant, reached by highway. General surface, level and hilly. Altitude, about 720 ft. Nature of soil, clay loam. Acres now used as meadow, about 30; in natural pasture, 38; in timber, 7, maple, hemlock, butternut and white ash. Fruit, 70 apple, 2 plum, 1 pear and 1 crab apple tree, strawberries and raspberries. Best adapted to corn, oats and potatoes. Fences, mostly barbed wire. House, 14 rooms, in good condition. Outbuildings: dairy barn, 30x60; horse barn, 24x36; poultry and hog house, 12x36, and tool shed, 20x24. Watered, house by well; barns and fields by creek. Occupied by owner. Reason for selling, wishes a larger farm. Price, $4,000. Terms: ½ cash and remainder on mortgage. Address J. Cummings, owner, Remsen, N. Y.

No. 374.— Farm of 311 acres; located 7 miles from Westernville P. O.; 7 miles from Alder Creek; 1 mile from school, churches and cheese factory; 5 miles from butter factory; 7 miles from milk station and 13 miles from condensing plant. Highways, mostly good dirt road and some state road. Nearest village, Boonville, population 1,909, 9 miles distant, reached by highway. General surface, rolling. Acres that can be used as meadow, 125; now used as meadow, 80; in natural pasture, 231; in timber, 100, maple, ash, hemlock, basswood and beech. Acres tillable, 100. Fruit, 150 apple trees. Adapted to hay, oats, potatoes and vegetables. Outbuildings: barn, 100x47, in good condition; barn, 30x40, in fair condition; shed, 18x28, and wood shed, 24x24. Watered, house, by well; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, $2,000 cash and remainder at 5 per cent with yearly payment of $100. Address Lillie L. Hall, owner, Westernville, N. Y.

ONONDAGA COUNTY

Area, 824 square miles. Population, 213,992. Annual precipitation, 46.66 inches. Annual mean temperature, 48.9°. Number of farms, 5,770. County seat, Syracuse.

This county is located in the central part of the state. Its northern line is in part bounded by Oneida Lake. Lake Skaneateles forms part of the southwest boundary. It is excellently drained by the Seneca River and Chittenango and Onondaga Creeks.

Its surface is gently undulating in the northern part. In the extreme southern part the surface is generally rough and hills extend in long ridges north and south with narrow valleys between. There is a general slope toward the center of the county into the flats of the "great level." In the southern portion we find a clay and dark sandy loam, in the valleys clay loam, in the central and northern portion a rich sandy and gravelly loam. Among the minerals found in this county are salt, iron ore, limestone and gypsum; the Onondaga limestone being an excellent building stone. Salt is obtained from salt wells in the vicinity of Syracuse. The value of the exported product has at times exceeded a million dollars annually. The county is adapted to general farming, the leading products being: corn, shelled, 308,903 bushels; oats, 863,835 bushels; wheat, 259,866 bushels; barley, 168,578 bushels; buckwheat, 40,223 bushels; potatoes, 592,675 bushels; hay and forage, 214,163 tons. As in many other counties of the state, alfalfa can be grown with great success. The total value of farm property is $37,291,043, an increase of 17.5 per cent. in ten years. The average price of improved lands is $67.58 per acre.

Domestic animals reported as follows: dairy cows, 27,474; horses, 14,622; swine, 16,590; sheep, 7,930; poultry, 338,686; production of milk was 21,035,070 gallons, which with the products of 55 milk stations and factories sold for $2,063,923. Numerous transportation lines intersect the county. Syracuse, with a population of 145,293 is a large manufacturing center and is the home of Syracuse University. There are 255 district schools well located throughout the county and 29 agricultural societies. The county has 90 miles of state and county roads and 927 miles of other improved highways. Onondaga is one of the progressive counties of the state.

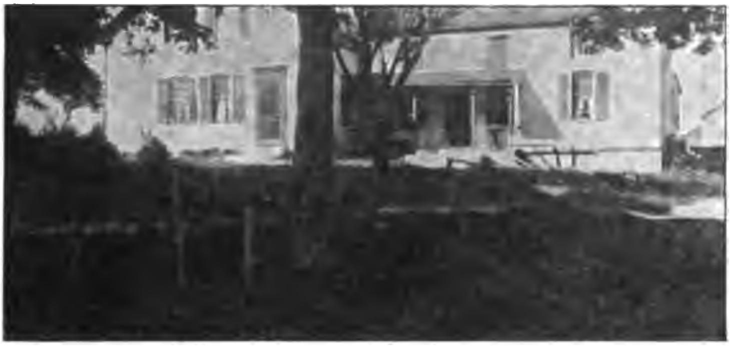


FIG. 46.— HOUSE ON FARM NO. 365, TOWN OF MARSHALL, ONEIDA COUNTY.

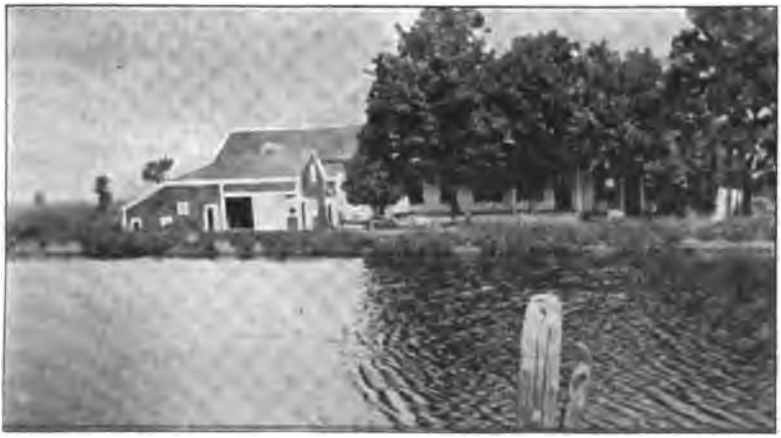


FIG. 47.— VIEW ON FARM NO. 369, TOWN OF VERONA, ONEIDA COUNTY.

TOWN OF CLAY

Population 2,661

No. 375.— Farm of 102 acres; located ¾ mile from Clay P. O., on line of N. Y. C. R. R.; ¾ mile from school, churches and butter factory. Highways, stone and state road. Nearest city, Syracuse, population, 145,293, 11 miles distant, reached by rail and highway. General surface, slightly rolling. Altitude, 600 feet. Nature of soil, black and clay loam. Acres that can be used as meadow, 30; in natural pasture, 12; in timber 12, maple, ash, beech, hickory and cherry. Acres tillable, 90. Fruit, about 100 apple, 12 pear and 6 plum trees. Best adapted to grain, potatoes, hay and cabbage. Fences, woven and barbed wire. House, main part, 2 stories, 30x36, addition, 16x24, with 11 rooms total. Outbuildings: barn 30x15, 30 feet high, dairy barn 18x105, machine house 20x32, small woodshed and poultry house. Watered, house, by well and cistern; barns, by well; and fields, by springs and streams. Occupied by owner. Reason for selling, ill health. Price on application. Terms, reasonable amount cash and remainder on long time at 5 per cent. Address George McKittrick, Clay, N. Y.

TOWN OF LYSANDER

Population 4,630

No. 376.— Farm of 200 acres; located 2 miles from Lysander P. O., R. D. No. 1; 4½ miles from railway station at Lamson, on line of D. L. & W. R. R.; 2 miles from school, churches and cheese factory. Highways, good. Nearest city, Fulton, population 11,138, 10 miles distant, reached by highway. Surface of farm, rolling. Altitude, 450 feet. Soil, sandy and stony. Acres that can be used as meadow, 140; in natural pasture, 40; in timber, 20, scrub. Acres tillable, 140. Fruit, a few apple trees, pears and grapes. Adapted to corn, rye, potatoes, oats and hay. Fences, poor condition. House, fair condition. Large barn, fair condition. House watered by well, barns by well, and fields by creeks. Occupied by tenant. Reason for selling, to settle estate. Price, $5,000. Terms, easy. Will rent. Address D. M. Hill, owner, Elbridge, N. Y.

No. 377.— Farm of 51 acres; located 3 miles from Lamson postoffice; 3 miles from railway station at Lamson, on line of D. L. & W. R. R.; 1 mile from Methodist church; 3 miles from butter factory; 3 miles from milk station. Highways, new state road. Nearest city, Syracuse, population 145,293, distant 20 miles, reached by rail and highway. General surface of farm, level. Altitude, 450 feet. Nature of soil sandy. Acres that can be used as meadow, 40; acres now used as meadow 30; in natural pasture, 10; in timber, 2, soft wood. Acres tillable, 45. Some fruit. Best adapted to corn, rye, potatoes and tobacco. Wire fences in fair condition. Large house in good condition. Large barn in fair condition. House and barn watered by wells; fields by well and creek. Farm now occupied by tenant. Reason for selling, owner in other business. Price, $5,000. Terms easy. Will rent. Address Charles H. Fancher, Lamson, N. Y.

No. 378.— Farm of 50 acres; located 6 miles from Baldwinsville postoffice (R. D. No. 4); 6 miles from railway station at Baldwinsville, on line of D. L. & W. R. R.; 1½ miles from school; 2½ miles from church; 2 miles from butter and cheese factories; 6 miles from milk station and condensing plant. Good highways. Nearest city, Syracuse, population 145,293, distant 20 miles, reached by rail and highway. Surface of farm, rolling. Altitude, 450 feet. Nature of soil, clay loam. All can be used as meadow. Acres tillable, 40. Adapted to corn and buckwheat. Poor fences. No buildings. Near Seneca river. Occupied by tenant. Reason for selling, owner does not want farm. Terms, easy. Will rent with option to buy. Address Walter Bliss, Baldwinsville, N. Y.

No. 379.— Farm of 110 acres; 2½ miles from Baldwinsville postoffice (R. D. No. 4); 2½ miles from railway station at Baldwinsville on line of D. L. & W. R. R.; ½ mile from school; 2½ miles from churches, butter and cheese factories, milk station and condensing plant. Highways, state road. Nearest city, Syracuse, population 145,293, distant 15 miles, reached by rail and highway. Surface of farm, level. Altitude, 425 feet. Nature of soil, sandy gravel. Acres than can be used as meadow, 90; acres now so used, 25; in timber, 10, maple and elm. Acres tillable, 90. Apple orchard. Adapted to tobacco, potatoes and corn. Poor fences. Large barns in good condition. House watered by well; barns and fields by creek. Seneca river near by. Occupied by tenant. Will rent with option to buy. Address Paul Doran, Baldwinsville, N. Y.

No. 380.— Farm of 100 acres; located 3 miles from Lysander postoffice (R. D. No. 4); 5½ miles from railway station at Lamson, on line of D. L. & W. R. R.; 1¼ miles from school; 3 miles from churches and butter factory; 5½ miles from milk station and condensing plant. Good highways. Nearest city, Syracuse, population 145,293, distant 20 miles, reached by rail and highway. Surface of farm level. Altitude, 450 feet. Nature of soil, clay. Acres that can be used as meadow, 60; acres now used as meadow, 25; in natural pasture, 20; in timber, 10, beech and maple. Acres tillable, 80. Apple trees. Adapted to corn, wheat, oats. Fences in fair condition. Large house in fair condition. Large barn in good condition. House and barn watered by wells; fields by creek. Occupied by tenant. Terms, easy. Will rent with option to buy. Address Mrs. F. P. Van Dorn, Lysander, N. Y.

TOWN OF MANLIUS

Population 6,301

No. 381.— Farm of 212 acres; located 1¼ miles from postoffice at Fayetteville, R. D. No. 1; 1¼ miles from railway station at Fayetteville on line of Chenango branch of W. S. R. R.; 1½ miles from school and churches; 1¼ miles from milk station. Highways, good stone road. Nearest city, Syracuse, population,. 145,293, distant 9 miles, reached by rail and highway. General surface of farm, some hills, but meadows mostly level to rolling. Altitude, 300 feet. Soil, mostly loam, a little clay and gravel. All can be used as meadow; 70 acres now used as meadow; in natural pasture, 70 acres; in timber, 50, both hard and soft, big trees. Acres tillable, 165. Fruit, 25 apple trees. Best adapted to alfalfa, grain and corn. Wire line fences; good pasture fences. House of 1½ stories, in fair condition. Basement barn, 50x30 and 30x40, 40 stanchions; horse barn, 30x40; hay barn, 40x60; silo, 16x36; various other small outbuildings. House watered by spring and cistern; barns and fields by creek and springs. Round Lake at north end of farm. Farm now occupied by tenant on shares. Reason for selling, owner has other property. Price, $15,000. Terms, part cash, rest mortgage. A good alfalfa farm; some hills, but meadows are such that loader handles it all. Address Dana H. Wells, owner, Fayetteville, N. Y.

No. 382.— Farm of 145 acres; located 1 mile from postoffice (R. D. No. 1) and railway station at Fayetteville, on line of Chenango branch of W. S. R. R.; 1¼ miles from school and churches; 1 mile from milk station. Good stone highway. Nearest city, Syracuse, population 145,293, distant 9 miles, reached by rail and highway. Surface of farm rolling and level except for hill in one lot. Altitude, 300 feet. Soil, mostly loam, a little clay. All can be used as meadow; 25 acres in natural pasture; in timber, 10, hemlock, hard and soft woods. Acres tillable, 133. Fruit, 200 apple trees just coming into bearing, 12 to 20 years old; 200 plum; 30 cherry; 25 pear; ¾ acre grapes. Best adapted to alfalfa, corn and grain. Good wire line and pasture fences. Good house, 2½ stories. Barns, 80x40, new gambrel roof, with wing, 24x40; 50x32, new gambrel roof; barn basement with stanchion room for 40 cows; silo, 14x36; numerous sheds. House watered by well; barns and fields by creek. Farm now occupied by tenant. Reason for selling, owner has other property. Price, $17,500. Terms, $4,500 cash, rest bond mortgage. Address Dana H. Wells, owner, Fayetteville, N. Y.

No. 383.— Farm of 145 acres; located 1 mile from postoffice (R. D. No. 1); and railway station at Fayetteville, on line of Chenango branch of W. S. R. R.; 1 mile from school, churches and milk station. State road. Nearest city, Syracuse, population 145,293, distant 8 miles, reached by rail and highway. Surface of farm, 45 acres hilly, 100 acres level. Altitude, 500 feet. Nature of soil, dark loam. Acres that can be used as meadow, 115; acres now used as meadow, 100; in natural pasture, 25; tillable, 115. Fruit, 57 apple trees, 3 pear, 3 plum, 6 cherry, 12 grapevines. Best adapted to alfalfa, timothy, clover, corn, potatoes, all small grains. Rail and wire fences in good condition. One 10-room house and one 7-room house in good condition. Three large barns; 2 small barns; good cow stables and tile silo. House watered by wells and cisterns; barns by well and creek, fields by creek. Limestone Creek and Erie Canal run through farm. Farm now occupied by owner and lessee. Reason for selling, owner does not want responsibility of farm. Price, $12,000. Terms, cash preferred. Might rent. Railroad siding on farm; canning factory ½ mile and alfalfa mill 1 mile distant. Address Miss Carrie M. Stearns, owner, Fayetteville, N. Y., R. D.

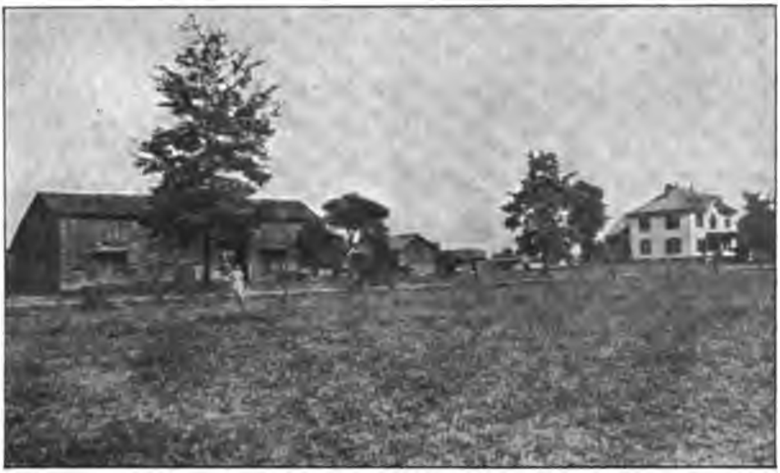


FIG. 48.— VIEW ON FARM NO. 375, TOWN OF CLAY, ONONDAGA COUNTY.

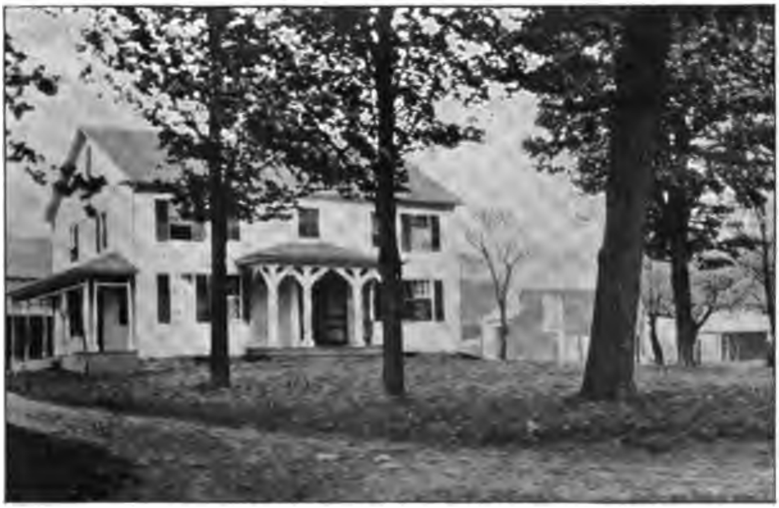


FIG. 49.— HOUSE ON FARM NO. 387, TOWN OF POMPEY, ONONDAGA COUNTY.

TOWN OF ONONDAGA

Population 6,267

No. 384.— Farm of 30 acres; located 4½ miles from Syracuse P. O., R. D. 3; 6 miles from railway station at Syracuse, on line of several railways; ¼ mile from school; 2 miles from churches and butter factory; ¾ mile from milk station. Highways, good. Surface of farm, rolling. Altitude, about 1,100 feet. Soil, limestone formation. Acres in meadow, 18; in timber, 4, beech and maple, second growth. Acres tillable, 26. Fruit, about 50 apple, 10 plum, 10 cherry, 10 pear, 5 peach and 2 quince trees, also berries, grapes and currants. Best adapted to alfalfa, potatoes, grain and fruit. Fences, mostly new wire, good. House, 8 rooms, good condition. Outbuildings: new barn, 32x44; with new cow stable for seven cows, 14x32; new hog house, 10x15; new poultry house, 16x20. All buildings except house have been built within last four years. Watered, house by well and cistern, barns by well. This farm is about 7 miles from Onondaga Lake. Occupied by owner. Reason for selling, ill health. Price, $4,000. Terms, $3,000 cash, balance on mortgage. Address Alice L. Amidon, owner, Station A, Syracuse, N. Y., R. D. No. 3.

No. 385.— Farm of 87 acres; located 4 miles from Marcellus P. O., R. D. No. 1; 1 mile from railway station at Howlett Hill, on line of Auburn & Syracuse Electric R. R.; 1 mile from school; 2 miles from churches and 1 mile from milk station. Highways, state road, except ½ mile. Nearest city, Syracuse, population 145,293, 6 miles distant, reached by rail and highway. General surface of farm, rolling. Nature and quality of soil, black clay. Acres that can be used as meadow, 75; in natural pasture, 12; in timber, 4, maple, beech, hemlock and ash. Acres tillable, 75. Fruit, about 50 apple trees and some other small fruit. Adapted to alfalfa, grain, hay, cabbage, potatoes, garden truck, etc. Fences, mostly wire, in fair condition. House with 10 rooms and good cellar, in good condition. Outbuildings: poultry house, corn house with basement for pigs, grain barn with horse and cow stable combined and shop. House watered by well, barns by well, and fields by running stream. Mud Lake, ½ mile distant. Occupied by tenant. Reason for selling, to settle an estate. Price, $7,500. Terms on application. Address T. H. McManus, executor, 23 South Pearl street, Albany, N. Y.

TOWN OF OTISCO

Population 1,058

No. 386.—Farm of 100 acres; located 5 miles from postoffice at Marietta (R. D. No. 5); 5 miles from railway station at Marietta, on line of Otisco branch of N. Y. C. R. R.; ½ mile from school; 1¼ miles from churches, butter factory and milk station; 4 miles from cheese factory, Highways, state road in part. Nearest village, Tully, population 559, distant 8 miles, reached by state road. Surface of farm, partly level and partly rolling; no side hills. Altitude, 1,600 feet. Clay loam, deep and mellow. Acres that can be used as meadow, 75; acres now used as meadow, 24; in natural pasture, 5; in timber, 18, mostly maple, large trees. Acres tillable, 80. Apple trees, 100; some pears, plums and cherries; also berries. Adapted to potatoes, cabbage, corn, wheat, oats, barley. Barbed and other wire fences; line fences good. House 15 rooms, in fair condition, needs small repairs. Grain barn, 34x40, extension, 24x36; cow barn, 30x46; horse barn, 36x48; hen and hog barn, 24x36. House and barn watered by well; fields by brooks. Otisco Lake 5 miles distant. Reason for selling, old age and ill health. Price, $3,000. Terms, ½ cash and rest mortgage. Address Elisha C. White, Syracuse N. Y., R. D. 5.

TOWN OF POMPEY

Population 2,344

No. 387.— Farm of 144 acres; 5 miles from Manlius P. O., R. D. 3, and railway station on line of Chenango Valley branch of the N. Y. C. R. R.; 40 rods from school; 1½ miles from church; 1¼ miles from butter factory and cheese factory; 1½ miles from milk station; 4 miles from condensing plant. Highways, good. Nearest village, Manlius, population 1,304, 5 miles distant, reached by highway; Syracuse, 14 miles distant, reached by trolley from Manlius. Surface, slightly rolling, no hills; lies sloping to southeast. Soil, dark clay and gravel loam. Acres in meadow, 40; in timber, 7 or 8; acres tillable, all except wood lot. 133 apple and a few plum trees. Adapted to wheat, corn, barley, oats, potatoes, cabbage and alfalfa. Fences, rail and wire, fair condition. House, 30x38, 10 rooms; wing, 12x16; wood house. Barns: horse barn and carriage house, 30x40, painted, in good condition; hog and corn house, 12 x14; hay, grain and cow barn, 42x68; 2 hay barns, 20x30 and 18x30. Watered, house by wells, barns by wells and springs, fields by springs. Occupied by tenant. Reason for selling, owner is not a farmer and is in poor health. Price, $75 per acre. Terms, part cash, part mortgage. Address C. A. Lakin, owner, Manlius, N. Y., R. D. No. 3.

No. 388.— Farm of 211 acres; located 6 miles from Manlius, on line of W. S. R. R.; 50 rods from school; 2 miles from churches, butter factories, cheese factories and milk station and 5 miles from condensing plant. Nature of highways, somewhat hilly, but good. Nearest city, Syracuse, population, 145,293, 16 miles distant, reached by highway and trolley from Manlius. General surface, rolling. Altitude, 1,400 feet. Nature of soil, sandstone, loam and muck. Acres used as meadow, 100; in natural pasture, 65; in timber, 35, hemlock, maple and elm. Acres tillable, 175. Fruit, 100 apple, 7 plum, 5 pear and 2 cherry trees; some raspberries. Adapted to corn, potatoes, alfalfa, oats, wheat, barley and cabbage. Wire fences, in good condition. House, 12 rooms, in good condition. New basement barn, 82x36, and one other outbuilding in fair condition. House watered by well and cistern; barns by well, and fields by springs. 7 miles from Cazenovia Lake. Occupied by owner. Reason for selling, wish to retire. Price, $9,000. Terms on application. Address Thomas F. Mullin, owner, Manlius, N. Y., R. F. D. No. 3.

No. 389.— Farm of 141 acres; located 5 miles from Manlius P. O., R. D. 3; 3 miles from railway station at Oran, on line of W. S. R. R.; 1 mile from school and church, butter and cheese factory and milk station. Highways, good. Nearest city, Syracuse, population 145,293, 15 miles distant, reached by highway and trolley. Surface, rolling. Soil, dark loam. Ten acres of timber, maple, beech and hemlock; a few pine trees, acres tillable, 131; 75 to 100 apple trees. Adapted to hay, alfalfa, wheat, barley, oats, corn and buckwheat. Fences, wire and rail, good condition. Large 12-room house, 2 cellars, good condition. Outbuildings: hay barn, with basement stable, 56x32; large silo; 2 large sheds attached to barn; grain barn, 30x40; granary, 16x20; carriage house, 25x35. House watered by well; barns, by well; fields, by spring and creek. Occupied by tenant. Reason for selling, other business. Milk collected at door. Price, $6,000. Terms, $2,000 cash, balance on easy terms. Address F. F. Hubbard, owner, Canastota, N. Y.

TOWN OF SKANEATELES

Population, 4,619

No. 390.— Farm of 135 acres; located 6 miles from Skaneateles postoffice (R. D. No. 1); 6 miles from railway station at Skaneateles, on line of Skaneateles R. R.; ½ mile from school; 3 miles from churches; 1½ miles from butter factory. Improved state highway. Nearest village, Skaneateles, population 1,768, reached by highway. Surface of farm, rolling. Nature of soil, gravelly. Acres that can be used as meadow, 120; number now so used, 60; in timber, 15, beech, maple, basswood. Acres tillable, 120. Plenty of fruit trees for home use. Adapted to wheat, corn, oats, barley, cabbage, potatoes and beans. Wire fences in good condition. Ten-room house in good condition; furnace heat. Grain barn, 90x30; wagon house; hog house; hen house; tool house; all in good condition. House watered by well; barn by spring, piped; fields by springs. Skaneateles Lake about 1 mile distant. Reason for selling, poor health. Price, $13,000. Terms, 40% cash, mortgage for balance. Might rent with option to buy. Cement stables under main barns; manure carrier. Address Anthony Austin, Skaneateles, N. Y., R. D. 1.

TOWN OF SPAFFORD

Population 1,082

No. 391.— Farm of 138 acres; located 5½ miles from Skaneateles P. O., R. D. No. 3; 3½ miles from railway station at Rose Hill, on line of M. & L. O. R. R.; ⅛ mile from school; 2 miles from churches and butter factory and 5 miles from milk station. Highways, state road, except 1 mile. Nearest city, Syracuse, population 145,293, 21 miles distant, reached by rail and highway. General surface, rolling; pasture, hilly. Altitude, 1,000 feet. Nature of soil, deep loam. Acres that can be used as meadow, 95; in natural pasture, 20; in timber, 6, beech, basswood, pine and hemlock. Acres tillable, 90. Fruit, 200 apple trees. Adapted to wheat, alfalfa, potatoes, cabbage, etc. Fences, wire, fair. House, 13 large rooms, good condition. Outbuildings: basement barn, 30x50, and one 28x72. House, watered by well and cistern, barns by well, fields by brook. Lake Skaneateles, ½ mile from farm. Occupied by tenant. Reason for selling, other business. Price, $8,000. Terms, $1,500 cash, balance at 5% and $200 on principal annually. Address Rev. Charles H. Hess, owner, 188 Partridge St., Albany, N. Y.

No. 392.— Farm of 144 acres; located 5 miles from postoffice at Skaneateles, (R. D. No. 3); 5 miles from railway station at Skaneateles; 1½ miles from church; 2 miles from cheese factory and condensing plant. Highways, good state road. Nearest village, Skaneateles, population 1,768, distant 5 miles, reached by highway. Farm part hilly and part rolling. Nature of soil, sandy. Acres used as meadow, 50; in natural pasture, 5; in timber, 15, maple, hemlock and cedar. Acres tillable, 120. About 75 apple trees; pears and plums. Adapted to wheat, corn and all grains. Woven wire fences and thorn hedge. Three-story house, newly painted and papered. Large grain barn and basement cellar with horse barn and shed attached. House watered by well and cistern; barn and fields by streams. Farm borders Skaneateles Lake. Now occupied by tenant. Reason for selling, death of owner. Price, $10,000. Terms, ⅓ cash. Will rent with option to buy. Address Mrs. John Leuri and Mrs. Wm. Fibber, Skaneateles, N. Y.

TOWN OF TULLY

Population 1,574

No. 393.— Farm of 104 acres; located ½ mile from Tully P. O., R. D. No. 1, and railway station, on line of D., L. & W. R. R.; ½ mile from churches; ½ mile from school and milk station. Highways, state road. General surface of farm, level and rolling. Soil, muck. Acres that can be used as meadow, 75; in natural pasture, 29. Acres tillable, 75. Best adapted to hay, cabbage and corn. Fences, wire, good condition. Ten-room house, in fair condition. Poor barns. House watered by spring and fields by springs. Occupied by owner. Reason for selling, other business. Price, $4,000. Terms, $2,000 cash, balance on mortgage. Address J. C. Reagan, owner, Tully, N. Y.

No. 394.— Farm of 97 acres; 1½ miles from postoffice (R. D. No. 1); 1½ miles from railway station at Tully, on line of D. L. & W.; ½ mile from school; 1½ miles from churches; 1½ miles from milk station. Highways, level, and half macadam. Nearest city, Syracuse, population 145,293, distant 18 miles, reached by rail and highway. Surface of farm, nearly level and some rolling. Altitude, 800 feet. Nature of soil, gravel. Acres that can be used as meadow, 40; acres now so used, 30; in natural pasture, 20; in timber, 10, beech and maple. Acres tillable, 87. Fruit, 100 good apple trees, plums and pears for family use. Adapted to hay, oats, corn, potatoes and wheat. Wire fences in good condition. Ten-room house in good condition. Grain barn, 30x70, basement, cement floors; horse barn, 22x42; all painted, in good repair. House, fields and barns watered by springs. Green Lake 1½ miles away. Occupied by tenant. Reason for selling, other business. Price, $10,000. Terms, ½ cash, balance mortgage. Will rent with option to buy. Address Charles Dowding, owner, Tully, N. Y.

ONTARIO COUNTY

Area, 674 square miles. Population, 54,628. Annual precipitation, 37.99 inches. Annual mean temperature, 49.2°. Number of farms, 4,416. County seat, Canandaigua.

This county is situated in the middle western portion of the state and is one of New York State's best agricultural counties. It is partly bounded on the east by Seneca Lake and is drained by Flint, Honeoye and Mud Creeks and Canandaigua outlet. The surface is quite irregular in the southwestern part, there being many steep hills and deep valleys. These gradually merge into moderate hills in about the center of the county and to gentle undulations and level country in the northeastern part. The county has considerable woodland consisting of ash, beech, elm, oak and sugar maple. The principal rocks which underlie the county are Onondaga limestone and Devonian sandstone. It also has quarries of gypsum, water limestone and salt. The soil is very productive, ranging from a rich gravelly loam, interspersed with clay in the northern and central portions, to a rich clay loam in the valleys of the southern part of the county. All forms of agriculture, including fruit culture, are successfully carried on in the county. The leading crops reported are corn, shelled, 434,909 bushels; oats, 979,354 bushels; wheat, 694,305 bushels; barley, 206,961 bushels; rye, 42,996 bushels; dry beans, 112,655 bushels; potatoes, 542,780 bushels; hay and forage, 634,000 tons; hops, 282,253 pounds. The total value of all farm property is $32,593,635, an increase of 37.4 per cent. in ten years. The average value of farm land per acre is $39.53, a gain of $8.24 during the last decade. The average value of improved land is $71.42 per acre. Domestic animals reported: dairy cows, 10,959; horses, 13,185; swine, 17,313; sheep, 35,190; poultry, 260,696; production of milk, 6,410,876 gallons, which valued with its products amounted to $465,930.

The county is intersected by several trunk lines of railroads, which furnish ample facilities for marketing all products. There are 193 district schools, and Hobart College and William Smith College for Women are located at Geneva. Here also is located the New York State Experiment Station, devoted to scientific agriculture and equal to any in the world. Large nurseries are located in this county. The county has 55 miles of state and county roads and 845 miles of improved highways.

TOWN OF GENEVA

Population 1,386

No. 395.— Farm of 50 acres; located 4 miles from city of Geneva; ¼ mile from railway station at Billsboro, on line of N. Y. C. R. R. (Pa. Div.); 1 mile from school; 4 miles from churches and milk station. Highways, gravel, good condition. Surface of farm, slightly rolling. Soil, some clay and some sand. All tillable, except 2 acres of timber. Fruit: apples, peaches, pears, plums, cherries and quinces. Adapted to corn, oats, potatoes, cabbage, wheat, etc. House, 14 rooms, good condition, brick. Also good tenant house. Outbuildings, 2 barns. Watered, house, by spring; barns, by well; fields, by spring. Farm has lake front, number of cottage sites, beautiful location. Occupied by owner. Reason for selling, ill health of owner. Price, $10,000. Terms to suit purchaser. Address Mrs. Elizabeth Rupert, owner, Geneva, N. Y., R. D. 1.

TOWN OF PHELPS

Population 4,891

No. 396.— Farm of 54 acres; located ½ mile from railway station at Oaks Corners, on line of N. Y. C. R. R.; ¾ mile from church; 4½ miles from butter factory and milk station. Highways, good. Nearest city, Geneva, population 13,232, 4½ miles distant, reached by rail and highway. Surface of farm, level. Soil, sandy loam. Acres in natural pasture, 15; in timber, 1, ash and soft maple; acres tillable, 40. Fruit: apples, cherries, peaches and pears. Best adapted to general farming. Fences, wire, poor. House, 12 rooms, good condition. Outbuildings: basement barn, 72x26; poultry house, 17x17, good condition. Watered by well. This farm is 4½ miles from Seneca Lake. Reason for selling, owner in other business. Price, $5,000. Terms, half cash, balance on mortgage at 6 per cent interest. Address Lincoln G. Backus, owner, Monrovia, Calif. Owner will rent.

TOWN OF RICHMOND

Population 1,208

No. 397.— Farm of 100 acres; located 6 miles from Honeoye P. O., R. D. 1; 8 miles from railway station at Naples on line of Lehigh Valley R. R.; 1 mile from school; 3 miles from churches. Highways, fair. Altitude, 1,200 feet. General surface of farm, sloping. Nature of soil, silt and shale loam. Acres in timber; 30 acres virgin forest, balance 60 years old. Best adapted to pasture; potatoes, when improved. Fences, wire. No house or barns. Honeoye Lake, 1½ miles distant. Reason for selling, owner has too much land. Price, $900. Terms, easy. Address B. G. Abbey, owner, East Bloomfield, N. Y., route 3.

TOWN OF SOUTH BRISTOL

Population 964

No. 398.— Farm of 220 acres; located 5 miles from Honeoye P. O.; 10 miles from railway station at Hemlock or Naples, on line of Lehigh Valley R. R.; ¼ mile from school; 5 miles from churches, butter factory, condensing plant, and milk station. Highways, part hilly, part state road. Nearest city, Canandaigua, population 7,501, 20 miles distant. Surface of farm, mostly gentle slope, part rolling. Altitude, about 1,800 feet. Soil, mostly loam, a few acres of muck. Acres in meadow, 50; in natural pasture, 90; in timber, 50, oak, pine, chestnut, maple, ash, hickory, elm, etc.; acres tillable, 150. Fruit, old apple orchard, some young peach and pear trees. Adapted to dairying and stock raising, also to hay, oats, potatoes, beans, raspberries and apples. Fences, mostly woven wire, some rail, good condition. House, 8 rooms, good condition. Outbuildings: barn, 34x50; barn, 34x48; barn, 34x36; wagon shed, work shop, poultry house and evaporator. Watered by well and springs. This farm is 2 miles from Honeoye Lake. Occupied by owner. Reason for selling, old age. Price, $5,500. Terms, $2,500 cash, balance on bond and mortgage. Address S. S. Williams, owner, Honeoye, N. Y.

ORANGE COUNTY

Area, 781 square miles. Population, 118,118. Annual precipitation, 52.5 inches. Annual mean temperature, 49.3°. Number of farms, 3,935. County seat, Goshen.

This county is situated in the southeastern part of the state bordering on New Jersey; the eastern line is bounded by the Hudson River and a small part of the southwestern line by the Delaware River. It is intersected by the Wallkill and also drained by the Shawangunk and Ramapo Rivers.

The surface is mostly long sloping hills with broad fertile valleys, except in the southeastern part and along the western border. These hills do not attain any great height and are arable to their summit. The eastern section of the county comprises a large part of the highlands of the Hudson. The hills are divided by a valley which opens on the Hudson just below Newburg, the soil of which is of a limestone formation. Directly west of these highlands extending north and south is the broad Wallkill Valley with its rich soil of black dirt and gravelly loam. To the west of this valley lies a chain of hills the soil of which is mostly a gravelly loam. Granite, limestone and iron ore are found in this locality. The county ships to New York City millions of gallons of milk, and the cities of northern New Jersey can be reached from any part of it in two hours. The total value of all farm property is $35,516,309, an increase of 44.6 per cent. in a decade. The average price of improved farm land is $75.28, an increase of 23.52 per cent. in ten years. The principal crops reported are: corn, shelled, 219,223 bushels; oats, 154,369 bushels; rye, 43,185 bushels; potatoes, 182,370 bushels; hay and forage, 98,985 tons. Domestic animals reported: horses, 8,714; swine, 8,581; sheep, 1,578; poultry, 299,894; dairy cows, 32,496; 13,475 head of cattle other than dairy cattle are also reported. There were produced 30,878,586 gallons of milk, which with the product of 68 milk stations and factories sold for $3,537,640. The county is traversed with main lines and branches of several important railroads, including the New York, Ontario & Western; Pennsylvania; West Shore and Erie. West Point, the United States Military Academy, is located on the shore of the Hudson River in this county. There are 169 district schools, many excellent high schools, several classical schools, Wallkill Academy and Union schools at Middletown and the Newburgh Institute for Boys at Newburgh. The county has 28 agricultural societies, 60 miles of state and county roads and 1,343 miles of improved highways.

TOWN OF BLOOMING GROVE

Population 2,116

No. 399.— Farm of 140 acres; 1½ miles from Craigville P. O. and railway station, on line of Erie R. R.; ½ mile from Farmingdale; 5 miles from Goshen, population 3,511. Creamery and school houses near farm. Highways, good. Soil, loam. Acres tillable, 125; timber, 15. Fruit, mostly apples. Occupied by tenant. House, 13 rooms, in good condition; also tenant house. Barn, improved cow stable, wagon house and ice house. Watered, house, by well and cistern; fields, by Cromeline creek and springs. Farm is suitable for dairy, horses, poultry, grain or for a summer home. Has an especially fine water supply. Price, $8,500. Terms, two-thirds cash. Address William V. Seaman, owner, Washingtonville, N. Y.

TOWN OF CHESTER

Population 2,135

No. 400.— Farm of 265 acres; located 2 miles from Chester P. O. and railway station on line of Erie R. R.; 1 mile from school, cheese factory and milk station; 1½ miles from Protestant churches. Highways, good. Nearest large village, Goshen, population 3,511, 5 miles distant, reached by highway. Surface of farm, part level, part hilly. Altitude, about 500 feet. Soil, clay, good. Acres that can be used as meadow, 165; in natural pasture, 100; in timber, 5; all kinds of hard wood; acres tillable, 250. Fruits of all kinds. Adapted to hay and all kinds of grain. Fences, stone, rail and wire. House, 13 rooms, bath, hot water heat, electric lights, 1 large hall, good condition. Outbuildings, plenty of barns, mostly new; room for 100 cows, good condition. Watered by well, cistern and windmill, also good springs and streams. Occupied by owner. Reason for selling, old age. Price, $40,000. Terms, one-half cash. Address James Seeley, owner, Chester, N. Y.

No. 401.— Farm of 90 acres; located ½ mile from Sugar Loaf postoffice; ½ mile from railway station at Sugar Loaf, on line of Lehigh & Hudson R. R.; ½ mile from school, churches and milk station. Good country roads. Nearest village, Goshen, population 3,511, distant 8 miles, reached by rail and highway. Surface of farm, some hilly, some rolling. Altitude, 500 feet. Good soil. Acres that can be used as meadow, 65; acres now so used, 20; in natural pasture, 30; in timber, 30. Acres tillable, 65. Small apple orchard. Adapted to grass and grain. Stone and rail fences in fair condition. House in fair condition, 6 rooms, summer kitchen. Barn, wagon house, ice house, woodshed. House and barn watered by well. Near Sugar Loaf Mt. Occupied by tenant. Reason for selling, other business. Price, $5,000. Terms, easy. Address Thomas Watts, Esq., 4 East Main St., Middletown, N. Y.

TOWN OF CORNWALL

Population 5,110

No. 402.— Farm of 50 acres; located ½ mile from Cornwall-on-Hudson P. O.; 1 mile from railway station at Cornwall Landing, on line of W. S. R. R.; ½ mile from school and churches, and 1½ miles from milk station. Highways, good. Nearest city, Newburgh, population 27,876, 5 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, good. Acres that can be used as meadow, 45; in timber, 3, mostly oak. Fruit, mostly apples and cherries. Adapted to all kinds of crops. Fences, stone wall and wire, in fair condition. House, 12 rooms and bath, hot and cold water, hot water heat, stationary tubs and hardwood floors. Outbuildings: horse barn, 28x32; cow barn, 45x36; wagon barn and shop, all in good condition. House, watered by village water; barns, by well; fields, by brook and springs. Hudson River, 1 mile distant, Storm King mountain in view of farm. Occupied by owner. Nice place for country home. Reason for selling, to settle an estate. Price on application. Address Edward A. Clark, Cornwall-on-Hudson, N. Y.

No. 403.— Farm of 50 acres; located 1½ miles from postoffice at Cornwall; 2 miles from railway station at Mountainville, on line of Erie R. R.; 1 mile from school and churches; 2 miles from milk station. Good highways. Nearest village, Cornwall, population 2,240, distant 2 miles, reached by highway. General surface of farm, hilly. Altitude, 200 feet. Acres that can be used as meadow, 40; acres now used as meadow, 20; in natural pasture, 10; in timber, 10. Acres tillable, 40. Fruit, peaches and apples. Best adapted to grass, grain, corn, potatoes and small fruit. Poor fences. Large house in good condition. Good-sized barn in good condition. House watered by living spring on upland; barns and fields by brook. Hudson River 3½ miles distant; brook running across farm. Farm now occupied by tenant as caretaker. Reason for selling, death of owner. Price, $5,000. Terms, cash. Dwelling has over 20 rooms and owner took summer boarders. Address Estate of Mary C. Thorne, H. W. Chadeaque, Atty., Newburgh, N. Y.

No. 404.— Farm of 65 acres; located ½ mile from postoffice at Cornwall; 2 miles from railway station at Cornwall Landing, on line of West Shore R. R.; ½ mile from school and churches. Nearest city, Newburgh, population 27,876, distant 5 miles, reached by rail. General surface of farm, level. Nature of soil, stony. Acres that can be used as meadow, 55; in natural pasture, 10. Acres tillable, 55. Best adapted to corn. Stone wall fences. Good house. Barn of good size. House watered by well; barn by cistern. Storm King Mt. near by. Farm now occupied by tenant. Price, $11,000. Terms, half down. Address Mrs. E. H. Mead, Cornwall, N. Y., c/o W. J. Clark.

No. 405.— Farm of 10 acres; located ½ mile from postoffice; 1 mile from railway station at Firthcliffe, on line of O. & W. R. R.; ⅛ mile from school; ¼ mile from churches; 1 mile from milk station and condensing plant. Good highways. Nearest city, Newburgh, population 27,876, distant 5 miles, reached by rail and highway. General surface of farm, level. Nature of soil, loam and black dirt. Acres that can be used as meadow, 8; tillable, 8. A few large oak trees. About 30 fruit trees; apple and pear. Adapted to gardening. Fences. stone wall. Good house of 13 rooms. Barn out of repair, about 30x35 feet. House and barn watered by city water; fields by well. Near Storm King Mt. Farm now occupied by tenant. Reason for selling, to settle estate. Price, $8,000. Terms, $5,000 cash. Will rent with option to buy. Address C. H. Mead Estate, C. E. Mailler, Exec., Cornwall, N. Y.

TOWN OF MINISINK

Population 1,405

No. 406.— Farm of 40 acres; located 1 mile from Unionville and Westtown postoffices; 1 mile from railway stations at Unionville and Westtown, on line of M. & U. R. R.; ¼ mile from school; 1 mile from churches, milk station and condensing plant. Good highways. Nearest city, Middletown, population 16,381, distant 14 miles, reached by rail and highway. Surface of farm, part hilly and part level. Altitude, 500 feet. Nature of soil, part sandy, part meadow. Acres used as meadow, 15; in natural pasture, 25. Acres tillable, 40. Fruit trees, about 30 apple and 10 cherry. Adapted to grains. Wire fences in good condition. House of 9 rooms with garret and fine cellar. Barn, room for 16 cows, 3 horses, in good condition. House watered by driven well and cistern; barn by spring in barnyard; fields by springs and streams. Occupied by tenant. Reason for selling, money needed for other investment. Price, $2,500. Terms, $1,500 cash, mortgage $1,000. Address Mrs. Lawrence Dunn, owner, Forest Home, Ithaca, N. Y., R. D. 2.

TOWN OF MONTGOMERY

Population 8,017

No. 407.— Farm of 4 acres; located ¾ mile from Montgomery P. O., R. D. 3 and railway station on line of Erie R. R. School and churches across road. Highway, state road. General surface, level. Altitude, 500 feet. Nature of soil, loam; acres tillable, 3. Best adapted to gardening. Fences, wire, all new. House, new, bungalow type, 7 rooms, hardwood floors, fire place. House watered by inside cistern and well. Large 2-story barn, newly painted. Reason for selling, owner has no use for same. Price, $2,800. Terms, $1,000 cash, balance 5 years, 5 per cent mortgage. Address J. M. Wilkin, owner, Montgomery, N. Y.

No. 408.— Farm of 110 acres; located 2 miles from Montgomery postoffice (R. D. No. 1); 1½ miles from railway station at Walden, on line of Walkill Valley R. R.; 1 mile from school; 1½ miles from churches and milk station. Good highways. Nearest city, Newburgh, population 27,876, distant 11 miles, reached by rail and highway. Surface of farm rolling. Altitude, 670 feet. Nature of soil, clay loam. Acres used as meadow, 75; in natural pasture, 25; in timber, 10, oak and cherrry. Acres tillable, 75. Apple orchard and small fruit. Adapted to grain, potatoes, hay, cabbage, corn. Good wire fences. House of 10 rooms, hot water heat. Three barns, granary, silo, wagon house, poultry house, ice house, sheds. House and barns watered by wells; fields by streams. Walkill river borders the farm. Occupied by tenant. Can give possession at once. Price, $14,500. Terms, ½ cash, balance 5%. This farm is about ¼ mile from state road. Will exchange for small village property. Address Harry Vail, New Milford, N. Y.

TOWN OF MOUNT HOPE

Population 1,589

No. 409.— Farm of 128 acres; located 7 miles from Middletown P. O., R. D.; 3 miles from railway station at Otisville, on line of Erie R. R.; ½ mile from school and churches; 4 miles from milk station and condensing plant. Highways, good. Nearest city, Middletown, population 16,381, reached by rail and highway. Surface of farm, comparatively level. Altitude, 900 feet. Soil, heavy loam. Acres in meadow, 15; in natural pasture, 30; in timber, 15, chestnut and oak; acres tillable, 80. Fruit, 30 apple, 12 peach and 10 pear trees. Adapted to all farm crops. Fences, stone and wire. House, 28x45, fine basement, in good condition. Outbuildings: barn, 28x65; poultry house, granary and ice house. Watered, house and barns, by well. The Shawangunk River runs through this farm. Occupied by tenant. Reason for selling, ill health. Price, $9,000. Terms, ½ cash, balance on mortgage. Address A. L. Saxton, owner, Patchogue, N. Y.

No. 410.— Farm of 208 acres; located 2½ miles from Guymard; 2½ miles from Graham, on line of Erie R. R.; 1 mile from school; 4½ miles from churches and condensing plant and 2½ miles from milk station. Highways, good. Nearest city, Middletown, population 16,381, 10 miles distant, reached by rail and highway. General surface, quite level. Nature of soil, gravelly. Acres that can be used as meadow, 50; now used as meadow, 30; in natural pasture, 40, and in timber, 65, oak and chestnut. Acres tillable, 70. Fruit, 100 peach and a few apple trees. Adapted to raising grain. Fences, stone and wire, in good condition. House, 10 rooms. Outbuildings: barn, 30x84; ice and milk house, 16x24. Watered, house, barns and fields by running water from springs. Occupied by owner. Reason for selling, other business. Price, $6,000. Terms: ½ cash and remainder on mortgage. Address W. W. Clark, owner, Otisville, N. Y.

TOWN OF WALLKILL

Population 2,803

No. 411.— Farm of 65 acres; located 2½ miles from Middletown P. O., R. D. No. 2; ½ mile from railway station at Mechanicstown, on line of N. Y., O. & W. R. R.; 1 mile from school; 2½ miles from churches; 1 mile from cheese factory; 1½ miles from milk station and 2½ miles from condensing plant. Highways, good. General surface, slightly rolling. Altitude, 575 feet. Nature of soil, loam. Acres that can be used as meadow, 52; in natural pasture, 12½; in timber, ¾, oak, ash, etc. Acres tillable, almost all. Fruit: peaches, apples, pears, plums and cherries. Adapted to wheat, corn and oats. Fences, stone wall and wire, good condition. House, large 10 room, good condition. Outbuildings: barn, 30x60; wagon house, hay house, ice house; all in good condition. Watered, house, by well and cistern; barns, by well, and fields by springs. Wallkill River, 1 mile distant. Occupied by owner. Reason for selling, wish to retire. Price, $12,000. Terms, ½ cash, balance on mortgage. Address G. W. McEwen, owner, Middletown, N. Y.

TOWN OF WARWICK

Population 8,113

No. 412.— Farm of 160 acres; located 1 mile from New Milford P. O. and railway station on line of Lehigh & Hudson R. R. Rs.; 60 miles to New York City; 1 mile from school; 1½ miles from church; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,505, 4 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 550 feet. Soil, slate and loam. Acres in meadow, 50; in natural pasture, 10; in timber, 10, rock and white oak. Acres tillable, 150. Fruit, 90 acres of peach and apple trees. Best adapted to fruit and dairying. Fences, wire, in good condition. House, 13 rooms, slate roof, in fine condition. Outbuildings: 2 barns, 28x34 and 22x40; granary, 28x40; tenant house, 5 rooms and all necessary outbuildings. Watered, house, by well; barns, by springs; fields, by springs and streams. This farm is 3 miles from Pochuck Mountains. Occupied by owner. Price, $40,000. Terms, to suit purchaser. Address Harry Vail, New Milford, N. Y.

No. 413.— Farm of 32 acres; located 1 mile from New Milford P. O. and railway station on line of Lehigh and Hudson R. R. Rs.; 2 miles from school; 1½ miles from churches. Highways, good. Surface of farm, rolling. Altitude, 520 feet. This land is all planted to fruit, about 3,000 peach and apple trees. Best adapted to fruit. Fences, wire, in good condition. No buildings. Watered by springs. Price, $5,500. Terms, $2,000 down, balance, $300 per year, interest at 5%. This is a good piece of land for some city man to build a bungalow on. Address Harry Vail, New Milford N. Y.

No. 414.— Farm of 35 acres; located 1 mile from New Milford P. O. and railway station, on line of Lehigh and Hudson R. R. Rs.; 1 mile from school; 1½ miles from churches; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,505, 4 miles distant, reached by rail and highway. Surface of farm, nearly level. Altitude, 550 feet. Soil, sandy loam. Acres in meadow, 23; in natural pasture, 4; in alfalfa, 8. Acres tillable, 31. Fruit, apples, cherries, pears, etc., for family use. Best adapted to alfalfa and fruit. Fences, stone and wire in good condition. House, 28x34, slate roof, in first

Celery Growing on Muck Land Near Syracuse, New York.

An Up-To-Date Cow Stable.

class condition. No barn. Occupied by tenant. Price, $5,000. Terms, ½ cash, or less, balance on mortgage at 5%. Address Harry Vail, New Milford, N. Y.

No. 415.— Farm of 45 acres; located 3 miles from Warwick P. O., R. D. and railway station, on line of Lehigh & Hudson River R. R.; 1 mile from school; 3 miles from churches. Nearest village, Warwick, population, 2,505. Nature of soil, muck. This property is undeveloped. Adapted to lettuce, celery, onions, potatoes, corn, etc. Price, $4,000. Terms, $500 cash, balance on contract. Address Harry Vail, New Milford, N. Y.

No. 416.—Farm of 15 acres; located ½ mile from Pine Island P. O. and railway station on line of Erie R. R.; ½ mile from school; ¼ mile from churches. Nearest village, Warwick, population 2,505, 5 miles distant, reached by good highway. General surface, level. Altitude, 500 feet. Nature of soil, muck. This property is undeveloped. Best adapted to onions, celery, potatoes, lettuce, etc. Price, $300 per acre. Terms, $500 down, balance on contract. Address Harry Vail, New Milford, N. Y.

No. 417.— Farm of 10 acres; located 1 mile from New Milford postoffice; 1 mile from railway station at New Milford, on line of L. & H. R. R.; 1½ miles from school and churches; 1 mile from milk station. Good highways. Nearest village, Warwick, population 2,505, distant 2½ miles, reached by rail and highway. Surface of farm rolling. Altitude, 670 feet. Nature of soil, sandy loam. This plot is planted entirely to peach and apple trees, 4 and 5 years old, bearing now. Best adapted to fruit. Good wire fences. Four-room bungalow. Small barn. House watered by spring. Price, $5,500. Terms, $1,500 cash, balance contract. This property is about 62 miles from New York City. Address Harry Vail, New Milford, N. Y.

No. 418.— Farm of 3 acres; located 1 mile from postoffice at New Milford; 1 mile from railroad station at New Milford, on line of L. & H. R. R.; 2½ miles from school; 1½ miles from churches; 1 mile from milk station. Good highways. Nearest village, Warwick, population 2,505, distant 2½ miles, reached by rail and highway. Surface of farm, rolling. Altitude, 670 feet. Nature of soil, sandy loam. This plot is planted entirely to peach and apple trees 4 years old, bearing now. Best adapted to fruit. Good wire fences. Bungalow of 3 rooms; also garage. House watered by spring. Occupied by tenant. Price, $3,000. Terms, $850 cash, balance contract. Address Harry Vail, New Milford, N. Y.

OSWEGO COUNTY

Area, 962 square miles. Population, 75,929. Annual precipitation, 41.36 inches. Annual mean temperature, 47.3°. Number of farms, 6,319. County seat, Oswego.

This county is located at the eastern end of Lake Ontario, Oneida Lake and Oneida River forming part of the southern boundary. It is crossed by the Oswego River and Salmon River lies wholly within the county.

The surface along Lake Ontario is comparatively level and the soil is gravelly loam. Farther back in the region drained by the Oswego River, the soil is mostly clay loam. The surface is rolling in the eastern part of the county and the soil is a gravelly loam with many scattered beds of muck. In the southern part, the surface is rolling, declining to a flat level tract in the region of Oneida Lake, the soil being sandy but fertile. Silurian sandstone, an excellent material for building purposes, constitutes the rock found next to the surface of the soil.

All fruits flourish and the county is noted for its excellent quality of small fruits and apples. During the season of strawberries and raspberries, refrigerator cars for berries are run daily to New York City, Boston and Philadelphia. Some of the principal crops are: corn, shelled, 205,162 bushels; oats, 771,640 bushels; buckwheat, 65,247 bushels; potatoes, 381,465 bushels; hay and forage, 111,464 tons. The value of all farm property is $23,804,151, an increase of 21.5 per cent. during the past ten years. The average price of land in this county is $18.27, and the average price of improved land is $35.97. There are many cheap farms with orchards that have been planted for fifty and sixty years but have never had any proper treatment. With modern methods of care these would yield abundantly. A notable instance of this has recently occurred. One farm of 100 acres, containing an orchard of ten acres, trees planted 54 years, was bought for $7.50 per acre, and the orchard produced under the first year's cultivation, fertilization, pruning and spraying, about $4,000 worth of apples. The entire farm has been cleared of brush, briars and other growth, and has been set out to orchard.

Domestic animals are reported as follows: dairy cows, 34,401; horses, 13,240; swine, 12,056; sheep, 3,659; poultry, 101,443; milk production, 20,101,582 gallons. Amount received from the products of 85 milk stations and factories, $1,888,709.

The county is traversed by the R. W. & O., N. Y. O. & W., D. L. & W. railroads and by the Oswego Canal, together with trolley lines running the entire length of the county from Syracuse to Oswego. A state normal and training school is located in Oswego and the largest cornstarch factory in the country has its plant in that city, the output being about 33 tons per day. Wheat and buckwheat flour mills are also located there. There are 273 district schools, located throughout the county, 58 miles of state and county roads and 1,195 miles of graded and improved highways. There are 66 agricultural organizations in the county, which indicate that the farmers are alert as to the best methods of agriculture.

TOWN OF ALBION

Population 1,510

No. 419.— Farm of 100 acres; located 2½ miles from Altmar postoffice (R. D. No. 1); 2¼ miles from railway station at Altmar, on line of N. Y. C. & H. R. R. R.; 1 mile from school; ¾ mile from churches; 2¼ miles from butter and cheese factories and milk station. Good highways. Nearest village, Pulaski, population 1,860 distant 6½ miles, reached by highway. Surface of farm rolling. Altitude about 700 feet. Nature of soil, gravelly and good Acres in meadow, 35; in natural pasture, 25; in timber, 25, beech, cherry, maple, basswood. Acres tillable, 60. Two large apple orchards; about 320 hard maple trees, a first class sugar bush. Adapted to general farming and dairying. Wire fences in fair condition; also good stone walls. Main house, 18x24, wing, 16x24, all newly made over. Barn, 24x36, fair condition; 30x24, needs some repairs. House and barns watered by wells; fields by large trout stream. Price, $2,250. Terms, one-half cash, balance on 5% to right parties. Address V. D. W. Pierce, Altmar, N. Y.

TOWN OF AMBOY

Population 670

No. 420.— Farm of 150 acres; located 3 miles from Williamstown postoffice; 3 miles from railway station at Williamstown, on line of N. Y. C. R. R.; ½ mile from school; 3 miles from churches, butter and cheese factories and milk station. Dirt road. Nearest village, Camden, population 2,181, distant 14 miles, reached by rail and highway. Surface of farm, half level and half rolling. Nature of soil, loam and some stone. Acres that can be used as meadow, 90; acres now so used, 75; in natural pasture, 75; in timber, 25, beech and maple. Acres tillable, 100. Apple orchard. Adapted to hay, corn and oats. Poor fences. House not in good condition. Barns fair. House watered by well; barn by well and springs; fields by springs. Reason for selling, old age and poor health. Price, $3,000. Terms, $1,500 down and balance on long term. Will rent. A good dairy or sheep farm. Address Lydia Harris, Williamstown, N. Y.

TOWN OF BOYLSTON

Population 578

No. 421.— Farm of 82 acres; located 5 miles from Lacona P. O., R. D. No. 1, and railway station, on line of R. W. & O. R. R.; 20 rods from school; 3 miles from church; 2½ miles from butter factory and cheese factory; 5 miles from milk station and condensing plant. Highways, state road. Nearest village, Pulaski, population 1,860, 11 miles distant, reached by highway. Surface of farm, fairly level. Altitude, 1,000 feet. Soil, gravelly. Acres that can be used as meadow, 25; in natural pasture, 30; in timber, 1, second growth of beech. Acres tillable, 45. Adapted to oats, corn, buckwheat and potatoes. Fences, stone and wire, good condition. House, 19x25, wing 18x26; woodshed 16x18. Outbuildings: basement barn 40x50, pig pen 14x16, poultry house 12x30, all buildings in good condition. House watered by well, barns by well and fields by stream. Occupied by owner. Reason for selling, to settle estate. Price, $1,800. Terms, part cash, balance on mortgage. Address Ella M. Lyon, owner, Lacona, N. Y., R. D. No. 1.

No. 422.— Farm of 210½ acres; located 5 miles from Lacona P. O., R. D. No. 2, and railway station, on line of R. W. & O. R. R.; ⅓ mile from school and church; 4 miles from butter factory; 3 miles from cheese factory; 5 miles from milk station and 11 miles from condensing plant. Highways, good. Nearest village, Pulaski, population 1,860, 11 miles distant, reached by highway. Surface of farm, part level and part rolling. Altitude, 1,070 feet. Soil, gravelly and shale rock. Acres used as meadow, 60; in natural pasture, 125; in timber, 25, beech, maple, poplar and black cherry. Acres tillable, 100. Fruit, plums, apples and pears. Adapted to oats, potatoes, corn and buckwheat. Fences, stone wall and wire, good condition. House, 24x24, wings, 14x20, and 16x24; good condition. Outbuildings: barn, 40x105; silo, 14x22; granary, 24x30, and hog pen. House watered by well, barns by well, and fields by streams. Occupied by owner. Reason for selling, ill health. Price, $3,500. Terms, one-third cash, balance on mortgage. Address Fred Hall, owner, Lacona, N. Y.

No. 423.— Farm of 85 acres; located 4 miles from Lorraine postoffice (R. D. No. 2); 10 miles from railway station at Lacona, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 1 mile from butter factory, cheese factory and milk station. Improved road within one mile of farm. Nearest village, Adams, population 1,571, distant 9 miles, reached by highway. Surface of farm, level. Nature of soil, gravelly loam. Acres that can be used as meadow, 30; in natural pasture, 30; in timber, 25, beech, birch and maple. Acres tillable, 40. Small fruit, enough for family use. Adapted to oats, potatoes, corn and buckwheat. Wire fences in good condition. House, 18x24, with wings 16x24 and 14x24, in good condition. Basement barn, 30x40, good condition. House and barns watered by wells; fields by stream. Occupied by owner. Reason for selling, owner has another farm and can not care for both. Price, $800. Terms, $300 cash, balance to suit. Will rent on plan to suit renter. Address Edward Thompson, Fulton, N. Y., R. D. 1.

No. 424.— Farm of 105 acres; located 3 miles from Lacona postoffice, R. D. No. 3; three miles from railway station at Lacona, on line of R. W. & O. R. R.; 1 mile from school, church, butter and cheese factories; 3 miles from milk station. Good highways. Nearest village, Lacona, population, 476, distant 2½ miles, reached by highway. General surface of farm, hilly, rough and level. Altitude, 800 feet. Nature of soil, gravelly and some stone. Acres that can be used as meadow, 50; acres now used as meadow, 40; in natural pasture, 55; in timber, 10, mostly maple. Acres tillable, 60. About 100 fruit trees of different kinds. Best adapted to oats, corn, rye, buckwheat, potatoes. Wire fences in good condition. House, 40x16, 1½ stories, wing, 12x16. Barn, 30x40; horse barn, 30x40; hog pen, 14x16, in good condition; good silo, 12x24. House and barns watered by wells; fields by creek. Lake Ontario 7 miles distant. Farm now occupied by owner. Reason for selling old age and owner's desire to retire. Price, $2,500. Terms, $1,500 down, balance on time. This farm will carry 16 head of cattle. Address James Chrisman, owner, Lacona, N. Y., R. F. D. 3.

TOWN OF GRANBY

Population 1,928

No. 425.— Farm of 119 acres; located 4½ miles from Fulton P. O., R. D., and railway station on line of N. Y. C., N. Y., O. & W. and R., W. & O. R. Rs.; ½ mile from school, churches and butter factory. Highway, state road. General surface of farm, level. Nature of soil, loam. Acres in meadow, 24; in pasture, 25; in timber, 7, virgin and second growth. Acres tillable, 80. Fruit, for family use. House, 11 rooms, 2 stories, frame, bath, acetylene gas, furnace heat. Outbuildings: barn 40x60, concrete basement, stanchions for 22 cows, 5 single stalls, 2 box stalls, silo 16x40, all buildings painted and in good condition. House and barns piped with water. Fields watered by stream. Occupied by owner. Reason for selling, has other business. Price, $11,000. Terms, part cash. Price includes 4 horses, 17 head of stock and large line of farming tools, which includes everything necessary to work a farm of this size. Address Milton Terpening, owner, R. D., Fulton, N. Y.

TOWN OF HANNIBAL

Population 2,334

No. 426.— Farm of 148 acres; located 1 mile from Hannibal; 1½ miles from station, on line of N. Y. C. R. R.; ½ mile from school; 1 mile from churches;

1¼ miles from butter factory and cheese factory; 2½ miles from milk station and 7½ miles from condensing plant. Highways, good, nearly all state road. Nearest city, Fulton, population 11,138, 7 miles distant, reached by highway. General surface, level. Altitude, 500 ft. Nature of soil, mostly clay loam. Acres that can be used as meadow, about 90; now used as meadow, 20 or 30; in natural pasture, 50 or 60; in timber, 15 or 20, largely soft maple, second growth. Acres tillable, about 90. Fruit, about 100 apple and 12 pear trees. Adapted to hay, grain and tobacco. Fences, stone and barbed wire, in fair condition. House, 12 rooms in good condition. Outbuildings: barns, large, including horse barn, cow stable, tobacco sheds, poultry house, open shed, store house, hog house, corn house, granary, silo and stripping room for tobacco. Watered, house and barns by well; fields by stream. Occupied by owner. Reason for selling, other business. Price, $6,600. Terms, $2,000 cash, balance on mortgage, payment of $100 annually with interest at 6 per cent. Address Elwin L. Gardner, owner, Hannibal, N. Y. Will rent.

TOWN OF MEXICO

Population 3,149

No. 427.— Farm of 124 acres; located 1 mile from Mexico postoffice; ¾ mile from railway station at Mexico, on line of N. Y. C. R. R.; 1 mile from school, churches, milk station and condensing plant. Nature of highways, stone road. Nearest city, Oswego, population 25,426, distant 16 miles, reached by rail and highway. General surface of farm, level. Nature of soil, loam and clay. Acres used as meadow, 100; in natural pasture, 40; acres tillable, 110. Adapted to hay, corn and oats. Fences in fair condition. House and barn in good condition. House and barn watered by well; fields by brook. Lake Ontario 4 miles distant. Occupied by tenant. Price, $8,500. Terms, $2,000 down, balance on easy payments. Will rent on shares or with option to buy. Address Buck & Harris, Mexico, N. Y.

No. 428.— Farm of 49 acres; located 2½ miles from Mexico postoffice (R. D. No. 2); 2½ miles from railway station at Mexico, on line of N. Y. C. R. R.; 1 mile from school; 2½ miles from churches, butter factory, milk station and condensing plant, and 4 miles from cheese factory. Nature of highways, crushed stone road. Nearest city, Oswego, population 25,426, distant 18½ miles, reached by rail and highway. Surface of farm, level. Nature of soil, clay loam. Acres that can be used as meadow, 49; in natural pasture, 20; in timber, 3, beech and maple. Acres tillable, 45. Adapted to hay and corn. Good wire fences. House and barns in good condition. House and barns watered by well; fields by creek. Lake Ontario 4 miles distant. Occupied by owner. Price, $4,500. Terms, one-half down. Address H. D. Harris, owner, Mexico, N. Y.

No. 429.— Farm of 124 acres; located 1 mile from postoffice (R. D. No. 2) at Mexico; ½ mile from railway station at Mexico, on line of N. Y. C. R. R.; 1 mile from school and churches; ½ mile from milk station; ¾ mile from condensing plant. Highways, stone and macadam. Nearest village, Mexico, population 1,474, distant one mile. General surface of farm, rolling. Nature of soil, gravel with gravelly loam. Acres that can be used as meadow, 110; number now so used, 40; in natural pasture, 54; in timber, 2, second growth maple. Acres tillable, 110. Fifty apple trees. Best adapted to corn, oats and hay. Wire fences in good condition. House in good condition. Barns, room for 24 milch cows and 4 horses, in good condition. House and barns watered by wells; fields by brook. Lake Ontario 4 miles distant. Farm now occupied by tenant. Reason for selling, owner has more land than he can work. Price. $8,500. Terms, $1,000 to $2,000 down. balance in easy payments. Will rent on shares or with option to buy. Will take payments $200 per year and interest at 5%. Address Buck and Harris, Mexico, N. Y.

TOWN OF ORWELL

Population 924

No. 430.— Farm of 172 acres; located 1½ miles from Orwell postoffice (R. D. No. 2); 5 miles from railway station at Richland, on line of N. Y. C. R. R.; ⅛ mile from school; 1½ miles from churches, butter and cheese factories; 5 miles from milk station. State and county roads. Nearest village, Pulaski. population 1,860, distant 9 miles, reached by rail from Richland. Some hills on farm. Nature of soil, good, with some stone. Acres that can be used as meadow, 70; acres now so used, 54; in natural pasture, 80; in timber 20, maple sugar bush and 10 acres of timber. Acres tillable, 140. A few old apple trees. Adapted to corn, oats, buckwheat, rye and barley. Stone wall and wire fences. House, upright and wing, 24x30 and 18x24, story and half, painted, in good condition. New barn, 32x40, basement with cement floor, stanchions for 30 cows; horse barn, 30x40. House watered by wells; barns by creek nearby; fields by two creeks. Salmon River 1½ miles distant; electric plant on river. Occupied by tenant. 22 cows on farm. Reason for selling, old age. Price, $4,000. Terms, $1.000 down. Will rent with option to buy. If sold at once farming tools would be included. Address Albert S. Barker, owner, Orwell, N. Y.

TOWN OF PALERMO

Population 1,281

No. 431.— Farm of 253 acres; located 9 miles from Fulton P. O., on line of N. Y. C. and D. L. & W. R. Rs.; 1 mile from school; 1½ miles from churches; 2½ miles from butter factory and cheese factory and 9 miles from milk station. Highways, state road. Nearest city, Fulton, population 11,138, 9 miles distant, reached by highway. General surface, rolling and level. Nature of soil, gravelly and loam. Acres that can be used as meadow, 55; in natural pasture, 38; in timber, 70, elm, beech, maple and birch. Acres tillable, 90. Fruit, 420 apple, 252 pear, 7 plum, 6 cherry and 2 mulberry trees. Best adapted to corn, oats, potatoes and hay. Fences, wire and rail in good condition Outbuildings: barn, 78½x107, with concrete floor and running water; barn, 50 x80; carriage house, 20x26; 2 story repair shop, 20x24; 2 story granary, 18x 16; silo, 16x30; sugar house, 13x16, and heading store house, 12x16. Houses, No. 1, a brick house, 21x28, annex, 17x 21, and woodhouse, 14x16. No. 2, is a frame building of 2 stories, 20x40. Watered, houses and barns by windmill and tank; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $13,500. Terms, reasonable. Cooperage plant, 100 horse power boiler, 50 horse power engine, saw mill, stave machine, heading machine, turner, two man saw jointer, cooper shop, stave shed and 2 heading sheds. Address H. J. Gulliver and Sons, Fulton, N. Y.

No. 432.— Farm of 128 acres; located 7 miles from Fulton postoffice (R. D. No. 4); 7 miles from railway station at Fulton, on line of N. Y. C. R. R. and D. L. & W. R. R.; 1 mile from school; 1¼ miles from church; 3½ miles from butter factory; 2½ miles from cheese factory; 7 miles from milk station; 9 miles from condensing plant. Good highways. Nearest city, Fulton, population 11,138, distant 7 miles, reached by highway. General surface of farm, rolling. Nature of soil, sandy loam and muck. Acres that can be used as meadow, 50; acres now used as meadow, 40; in natural pasture 50; in timber, 28, beech, maple, pine, hemlock, etc. Acres tillable, 60. 200 apple trees. Adapted to corn, potatoes, oats and grass. Rail and wire fences in good condition. Two-story house in first class condition; upright, 20x26, wing 18x26, wing 18x20. Cow barn, 30x70, basement, cement floor, water system; new hen house, 12x34; corn house; hog pen, drinking basins. Horse and wagon barn, 45x50, water in barn. House watered by well and cistern barns by water system; fields by brook. Occupied by owner. Reason for selling, owner wishes to retire. Price, $8,000. Terms, $5,000 cash, mortgage for balance. Address Geo. A. Jackson, owner, Fulton, N. Y., R. D. 4.

TOWN OF PARISH

Population 1,392

No. 433.— Farm of 97 acres; located 6 miles from Parish P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.; ⅛ mile from school; 2½ miles from churches, butter factory and cheese factory and 6 miles from milk station. Nearest village, West Amboy, 2½ miles distant, reached by highway. General surface, rolling. Nature of soil, gravelly. Acres in meadow, 60; in natural pasture, 67; in timber, 30, all kinds. Acres tillable, 60. Fruit, some apples. Best adapted to corn, oats and potatoes. Fences, stone wall and wire. House, in poor condition. No outbuildings. Reason for selling, to settle an estate. Price, $1,000. Terms, $300 cash, balance on mortgage. Address Mary E. Harter, owner, Parish, N. Y.

No. 434.— Farm of 150 acres; located 2 miles from West Amboy; 6½ miles from Parish, on line of N. Y. C. R. R.; ½ mile from school; 2 miles from churches, butter factory and cheese factory; 6½ miles from milk station. Highways, hilly. General surface, rolling. Altitude, 600 feet. Nature of soil, gravelly. Acres now used as meadow, 50; in natural pasture, 50. Acres tillable, 80. Fruit, 75 trees, apples, pears and cherries. Adapted to corn, oats and potatoes. Fences, wire in good condition. House, 11 rooms. Outbuildings: basement barn 30x40, hay barn, 34x44 and poultry house, 12x20. Watered, house by well; barn and fields by creek. Occupied by owner. Reason for selling, ill health. Price, $3,500. Terms, $1,500 cash and remainder on mortgage. Address William Woolworth, owner, Parish, N. Y.

TOWN OF REDFIELD

Population 678

No. 435.— Farm of 65 acres; located ¼ mile from R. F. D.; 6 miles from Williamstown, on line of R. W. & O. R. R.; ¼ mile from school; 1 mile from churches, butter factory and cheese factory; 6 miles from milk station. Highways, stone road. Nearest village, Redfield, 1 mile distant, reached by highway. General surface, rolling and level. Altitude, 1,150 feet. Nature of soil, gravelly loam and muck. Acres that can be used as meadow, 65; now used as meadow, 20. Acres tillable, 65. Fruit, about 20 apple trees. Adapted to potatoes, onions, corn and oats. Fences, wire, in good condition. House, 12 rooms, in good condition. Outbuildings, barn 20x50, in poor condition. Watered, house and barns by well, and fields by spring brook. Occupied by owner. Reason for selling, too much land. Price, $1,500. Terms: $800 cash and $100 per year. Address, W. J. Dowling, owner, Williamstown, N. Y.

TOWN OF RICHLAND

Population 3,920

No. 436.— Farm of 93 acres; located 1 mile from Pulaski, on line of N. Y. C. R. R.; 1/20 mile from school; 1 mile from churches, cheese factory, milk station and condensing plant. Highways, state road. General surface, level and rolling. Altitude, 250 feet. Nature of soil, loam. Acres that can be used as meadow, nearly all; in natural pasture, 5. Acres tillable, 85. Fruit, a few plum, pear and apple trees. Adapted to fruit and grain. Fences, wire. House, large. Outbuildings, large barn and sheds. Watered, house and barns by well; fields by creek. Occupied by owner. Reason for selling, wish to retire. Price, $25,000 for farm and nursery business. Terms: part cash and remainder on mortgage. Address, Lawrence J. Farmer, owner, Pulaski, N. Y.

No. 437.— Farm of 278 acres; located 1½ miles from Pulaski, on line of N. Y. C. R. R.; 1½ miles from schools, churches, cheese factory, milk station and condensing plant. Highways, state road. Nearest city, Oswego, population 25,426, 25 miles distant, reached by rail and highway. General surface, rolling. Altitude, 740 feet. Nature of soil, clay loam. Acres used as meadow, 100; in natural pasture, 95; in timber, 16, maple, beech and hemlock. Acres tillable, 100. Fruit, 24 apple trees of different varieties. Adapted to corn, oats, buckwheat and barley. Fences, wire, in good condition. House, 14 rooms, steam heat, also new 11 room tenant house. Outbuildings: barn, 50x110 with concrete stable, horse barn in good condition and new milk house. House and barns watered by well and fields by 2 streams. Four miles from Lake Ontario. Occupied by tenant. Reason for selling, other business. Price, $14,000. Terms: $4,000 cash and remainder easy payments. Also, 32 Holstein cows, 2 horses, gasoline leader tractor, full set of farm tools, automobile truck, etc. Address, A. E. Olmstead, owner, Ontario Iron Works, Pulaski, N. Y.

TOWN OF SCRIBA

Population 2,260

No. 438.— Farm of 144 acres; located 7 miles from Fulton P. O., R. D. No. 4; 5 miles from railway station at Lycoming, on line of N. Y. C. & H. R. R. R.; ½ mile from school; 2½ miles from churches; 2½ miles from butter factory, cheese factory and milk station. Highways, good gravel road. Surface, level and rolling. Soil, gravel and muck. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 10, ash, elm and some soft wood. Acres tillable, 100. Fruit, 300 bearing apple trees of standard varieties, 225 pear trees just coming into bearing. Best adapted to general farm crops and garden truck. Fences, wire, in fair condition. Two houses, one of 7 rooms and one of 6 rooms, good condition. Outbuildings: basement barn, 30x40; barns, 24x30 and 24x32, in good condition. House watered by well, barns by well, and fields by stream. Paddy Lake, 200 feet from one corner of farm. Occupied by owner. Reason for selling, desires smaller farm. Price, $7,000. Terms, half cash, balance on mortgage. Address P. H. Nelson, owner, Fulton, N. Y., R. D. No. 4.

TOWN OF VOLNEY

Population 2,420

No. 439.— Farm of 125 acres; located 6 miles from Fulton P. O., R. D. No. 2; 4 miles from railway station at Seneca Hill, on line of N. Y. C. and N. Y. O. & W. R. Rs.; 2 rods from school; 1 mile from church, butter factory, cheese factory and milk station. Highways, partly state road, balance gravel. Nearest city, Fulton, population, 11,138, 6 miles distant, reached by highway. General surface, rolling. Soil, heavy clay and gravelly loam. Acres used as meadow, 30; in natural pasture, 35; in timber 5. Fruit, 400 apple trees, an abundance of other fruit. Adapted to hay, corn, all kinds of grains, potatoes and dairying. Fences, good, mostly wire. Large 14-room house, fine condition. Outbuildings: basement barn, 44x50, other barns, 30x40 and 32x44, silo and smaller buildings. House watered by well, barns by well. Occupied by tenant. Reason for selling, ill health. Price, $6,000. Terms, ⅓ or ½ cash, balance on mortgage. Address A. B. Sanford, owner, Fulton, N. Y.

No. 440.— Farm of 199 acres; located 5 miles from Fulton P. O.; 4 miles from railway station at Seneca Hill, on line of R. W. & O. and N. Y. O. & W. R. Rs.; ⅛ mile from school; 3 miles from churches, butter factory and cheese factory; 4 miles from milk station and 5 miles from condensing plant. Highways, good. Surface of farm, rolling. Soil, gravel and heavy dark loam. Acres that can be used as meadow, 40; in natural pasture, 40 to 50; in timber, 25, birch, hard and soft wood. Acres tillable, 125. Fruit, 350 apple and 300 pear trees, all varieties; 40 plum trees, peaches, cherries, grapes and berries. Adapted to berries, potatoes, corn, wheat, oats and cabbage. Fences, wire and rail, good condition. Large double 12-room house, good condition. Outbuildings: barn, 30x82, with addition 20x25; horse barn, 24x58; large shed; 80-ton silo, and several smaller buildings. House watered by well, barns by well, and fields by streams. Occupied by owner. Reason for selling, desires smaller farm. Price, $15,000. Terms, half cash, balance on mortgage. Address W. Rath, owner, Fulton, N. Y., R. D.

TOWN OF WEST MONROE

Population 935

No. 441.— Farm of 87 acres; located 2½ miles from West Monroe P. O. and railway station on line of N. Y., O. & W. R. R.; 1 mile from school; 2½ miles from church, butter factory, cheese factory and milk station. Highways, good. Surface of farm, rolling. Soil, sandy and clay loam. Acres in meadow, 40; in natural pasture, 25; in timber, 12, second growth. Acres tillable, about 75. Fruit, 25 apple, 1 cherry and 2 plum trees, also 1 grape vine. Adapted to hay, oats, corn, potatoes, wheat and buckwheat. Fences, wire, good. House, upright, 18x24, with wing, 15x20. Outbuildings: barn, 30x40; barn, 40x60; wagon house, 13x24; hog house, 13x16. Watered, house and barn, by well; fields, by spring. This farm is 1½ miles from Oneida Lake. Occupied by owner. Reason for selling, ill health. Price, $4,500. Terms, $1,000 cash, balance on easy terms. Address John E. Lord, owner, West Monroe, N. Y.

TOWN OF WILLIAMSTOWN

Population 861

No. 442.— Farm of 176 acres; located 4 miles from Williamstown P. O., R. D. No. 3; 4 miles from railway station at Williamstown, on line of R. W. & O. R. R.; ¼ mile from school; 4 miles from churches; ½ mile from milk station and 4 miles from condensing plant. Highways, hilly, mapped for state road. Nearest village, Camden, population, 2,181, 10 miles distant, reached by rail. General surface, fairly level. Altitude, 1,200 feet. Nature of soil, black loam and muck. Acres that can be used as meadow, 35; now used as meadow, 25; in natural pasture, 50; in timber, 65, birch, maple and pulp wood. Fruit, small apple orchard. Adapted to hay, oats, corn and potatoes. Fences, wire. House, 7 rooms, good condition. Outbuildings: horse barn, 20x24; basement cow barn, 26x36, basement, 14x26 Watered, house, by well and fields by brooks. Occupied by owner. Reason for selling, wish to retire. Price, $2,000. Terms, ½ cash, balance on mortgage. Address, O. N. Secor, owner, Williamstown, N. Y.

No. 443.— Farm of 250 acres; located ¼ mile from Kasoag postoffice, on line of N. Y. C. & H. R. R. R.; ⅓ mile from school; 3 miles from churches; 2 miles from cheese factory; 3 miles from milk station. Good highways. Nearest large village, Camden, population 2,181, distant 13 miles, reached by rail and highway. General surface of farm, level. Altitude, 650 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 150; acres now so used, 100; in natural pasture, 50; in timber, 50, pine, maple sugar bush, spruce, and hemlock. Acres tillable, 150. Five apple trees. Adapted to corn, potatoes, beans and hay. Wire fences in fair condition. Good house, 35x48, hot and cold water, bath, gas, furnace. Barn, 42x60, hip roof; granary, 16x24; shop, 16x20; 2 hen houses, 14x22 and 8x14; sugar house, 8x16; all in good condition. House watered by well and running water; barn by running water in tank; fields by lake and stream. Kasoag Lake on farm. Occupied by owner. Reason for selling, owner wants smaller place. Price, $9,000. Terms, $2,000 on mortgage at 5%. Fine location for summer boarding business. Address E. C. Bailey, owner, Kasoag, N. Y.

No. 444.— Farm of 80 acres; located ½ mile from Williamstown postoffice, R. D. No. 3; one-fourth mile from railway station at Williamstown, on line of N. Y. C. R. R.; ¼ mile from school and condensing plant; ½ mile from churches and milk station Good highways. Nearest village, Camden, population 2,181, distant 10 miles, reached by rail and highway. General surface of farm, rolling and level. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; in timber, 10, hard and soft maple and butternut. Fifteen fruit trees. Adapted to corn, oats, rye, millet, buckwheat, potatoes. Wire fences in good condition. House, 50x38, in good condition. Three barns, 40x30; 40x25; 40x30; hen house; granary, 25x20. House watered by well inside; barns and fields by springs. Now occupied by owner. Reason for selling, old age. Price, $5,000. Farm clear of all debt. Address Eugene Dunn, owner, Williamstown, N. Y.

No. 445.— Farm of 50 acres: located 2¾ miles from postoffice at Williamstown (R. D. No. 3); 2½ miles from railway station at Williamstown, on line of N. Y. C. R. R.; 2½ miles from school; 1 mile from church; 2½ miles from butter factory and milk station, 1 mile from cheese factory. State road purposed. Nearest city, Syracuse, population 145,293, distant 40 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; acres now used as meadow, 20; in natural pasture, 10; in timber, 5; acres tillable, 40. Apple trees, 40. Adapted to corn, beans, buckwheat, potatoes. oats and grass. Mostly wire fences. House of 10 rooms, painted, in fine condition. Barn, 30x40, with basement, room for 20 cows; granary, 14x14; hen house; hog house; sheep shed; horse barn, 14x16; new garage, 22x16; machine shed. House watered by well at back door: barns and fields by springs. Occupied by owner. Reason for selling, ill health. Price, $3.000. Terms, part cash. This is a dairy farm; carries 10 cows, 20 sheep, team of horses, 150 hens, 40 turkeys, 4 hogs. Will sell with stock and tools if wanted. Address George C. Miner, Williamstown, N. Y.

No. 446.— Farm of 790 acres; located 2½ miles from postoffice at Williamstown; 2½ miles from railway station at Williamstown, on line of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches, cheese factory, and milk station. Highways, good. Nearest village, Camden, population 2.181, distant 8 miles, reached bv rail and highway. Surface of farm, partly rough, rolling and level. Altitude, 800 feet. Nature of soil, gravel, loam and 20 to 30 acres of muck. Acres that can be used as meadow, 349; number now so used, 41; in natural pasture, 200; in timber, 200, hardwood and hemlock. Acres tillable. 319. Adapted to general farming. Wire fences in good condition. Nine-room house in good condition. Barn, 40x100 with good cement basement, condition good: horse barn, 32x45; hog house, 20x28; corn house, 18x28. House and barns piped inside. Fields watered by running water. Salmon River 6 miles distant. Occupied by tenant. Tenant will vacate or work land longer if desired. Reason for selling, farm located too far from owner's home. Price. $25,000. Terms, as can be managed. Will rent with option to buy to right party; and subject to tenant's rights. Muck land is drainable. Address R. B. Sworts, owner, Dundee, N. Y.

No. 447.— Farm of 192 acres: located 2½ miles from postoffice and railway station at Kasoag; ¾ mile from school: 2 miles from church and cheese factory;

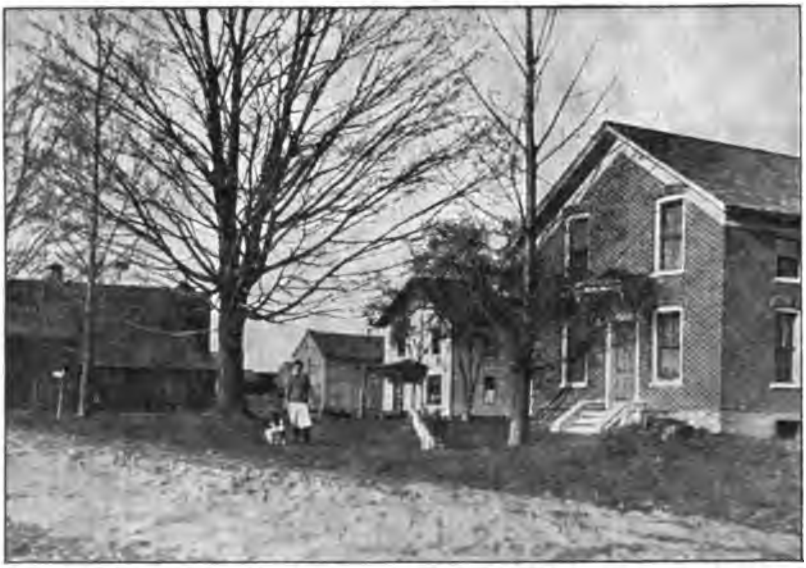


FIG. 50.— GENERAL VIEW ON FARM NO. 431, TOWN OF PALERMO, OSWEGO COUNTY.

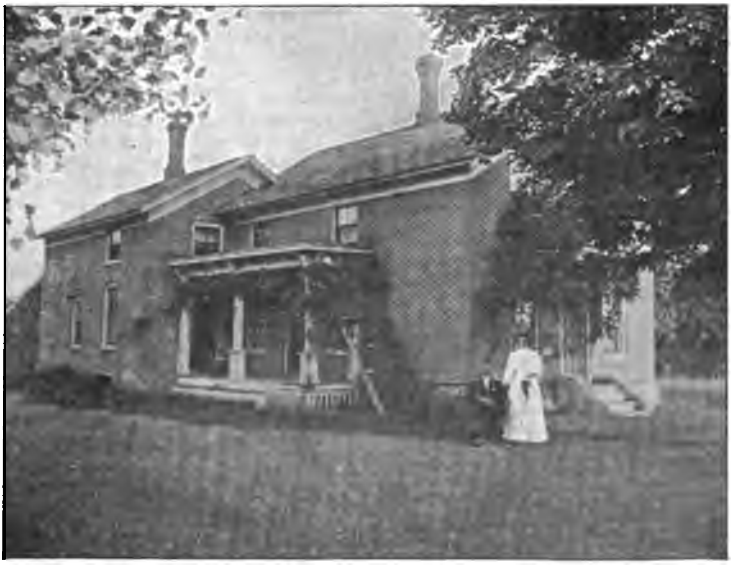


FIG. 51.— MAIN HOUSE ON FARM NO. 431, TOWN OF PALERMO, OSWEGO COUNTY.

5½ miles from milk station. Highways level and good. Nearest large village, Pulaski, population 1,860, distant 12 miles, reached by rail and nearly all state road. General surface of farm, mostly level, some rolling. Altitude, 750 feet. Nature of soil, gravelly. Acres that can be used as meadow, 75; number now so used, 50; in timber, 50, mostly beech, birch and maple. Acres tillable, 80. About 15 fruit trees of different varieties on farm. Best adapted to corn, oats, barley, rye and hay. Mostly wire fences in good condition. Large 10-room house in good condition. Cow barn, 35x41; hay and grain barn, 24x34; horse barn, 18x36; all in first class condition. House and barns watered by wells; fields by pond and stream. Salmon River 3 miles distant. Farm now occupied by owner. Reason for selling, poor health; must give up farming. Price, $5,500. Terms half down, balance secured by first mortgage. Farm is in good dairy section and pleasantly located. Address George B. Waters, Kasoag, N. Y.

No. 448.— Farm of 62 acres; located ½ mile from postoffice at Williamstown, R. D. No. 3: ¼ mile from railway station on line of N. Y. C. R. R.; ¼ mile from school, churches and milk station; ½ mile from cheese factory. Good highways. Nearest large village, Camden, population 2,181, distant 10 miles, reached by rail or state road. General surface of farm, rolling. Nature of soil, gravel and clay loam. Acres that can be used as meadow, 50; number now used as meadow, 25; in natural pasture, 25; in timber, 10, maple, birch, beech, elm. Acres tillable, 50. Fruit: plums, apples, grapes, currants, gooseberries. Best adapted to corn, oats, potatoes, alfalfa, beans. Good wire fences. Ten-room house in good condition. Outbuildings: horse barn; cow barn; tool house; hen house; ice house; swing stanchions for 10 cows. Water in house; fields watered by springs. Fish creek forms boundary of farm. Farm now occupied by tenant. Would rent on shares or with option to buy, but would rather sell. Reason for selling, death of husband. Price, $4,000. Terms, $2,000 down. Will take first mortgage at 6% interest twice a year. Address Mrs. Ida M. Robinson, R. F. D. 3, Williamstown, N. Y.

OTSEGO COUNTY

Area, 956 square miles. Population, 48,534. Annual precipitation, 46.52 inches. Annual mean temperature, 46.3°. Number of farms, 5,346. County seat, Cooperstown.

This county is situated in the east-central part of the state. It is drained by the Susquehanna River which has its source in Otsego Lake, by Charlotte River and Butternut and Schenevus Creeks. Like all the counties of the state it has an abundance of clear, pure water.

The surface consists of high broad ridges and long deep valleys, which are generally very wide. Woodlands of oak, sugar maple, ash, beech and elm, are well scattered through the county and cover nearly one-fourth of its area, namely, 143,817 acres. Sandstone and limestone underlie a part of the county, furnishing excellent building material. The soil in the northern part is a gravelly loam while in the eastern part clay loam predominates. In the southern section a red shale soil is found. In the other parts of the county the soil of the ridges consists of gravelly loam, while the valleys are covered with a dark clay loam. As a whole the county is adapted to pasturage and all kinds of farming. Otsego County produces more hops than any other county in the state, the yield in 1910 being 2,287,383 pounds. Some of the other leading products are: corn, shelled, 52,986 bushels; oats, 853,523 bushels; buckwheat, 86,483 bushels; potatoes, 285,624; bushels; hay and forage, 164,358 tons. The valuation of all farm property is $26,018,419, an increase of 21 per cent. in a decade. Domestic animals are reported as follows: dairy cows, 39,566; horses, 11,586; swine, 11,266; sheep, 8,249; poultry, 414,894; production of milk, 28,047,600 gallons; this, with the products of 75 milk stations and factories, showed receipts of $2,796,808. The transportation facilities of the county are excellent. Richfield Springs is popular as a health resort, the springs having great medicinal value. A state normal school is located at Oneonta. There are 296 district schools in the county, 25 agricultural organizations, 78 miles of state and county roads and 2,078 miles of improved highways.

TOWN OF BUTTERNUTS

Population 1,539

No. 449.— Farm of 97 acres; located 2 miles from Holmesville postoffice and railway station, on line of O. & W. R. R.; 1 mile from school; 2 miles from churches, butter factory and milk station; 8 miles from condensing plant. Good highways. Nearest city, Norwich, population 8,342, distant 8 miles, reached by rail and highway. General surface of farm, level. Soil, very rich loam. Acres that can be used as meadow, 60; number now used as meadow, 40; in timber, 17, pine, chestnut, oak and maple. Acres tillable, 75. Plenty of apples, plums and cherries for family use. Best adapted to corn and all kinds of grain and vegetables. Rail and wire fences in fair condition. House of 12 rooms in good condition. Basement barn, 30x54; wagon house, 26x36; and other outbuildings. House watered by well; barns and fields by springs. Unadilla River one mile distant. Farm now occupied by owner. Owner has lived on this farm 40 years. Reason for selling, old age. Price, $3,000. Terms, $1,200 cash, remainder on mortgage. This is one of the best small farms to be had for the money. Address James H. Wells, South New Berlin, N. Y.

No. 450.— Farm of 137 acres; located 3 miles from Mt. Upton postoffice; 3 miles from railway station at Mt. Upton, on line of O. & W. R. R.; 1 mile from school; 3 miles from churches and condensing plant. Highways part hilly but good. Nearest village, Mt. Upton, population about 700, distant 3 miles, reached by highway. General surface of farm, rolling to level. Altitude, 1,525 feet. Nature of soil, red shale, smooth, stone picked. Acres that can be used as meadow, 60; number now so used, 50; in natural pasture, 50; in timber, 37; 50,000 hemlock, pine and hardwood. Acres tillable, 60. Fruit trees, 100 apple, 20 pear, some plums. Adapted to hay, millet potatoes and corn. Mostly wire fences. House, 24x30, in fair condition; also wing and woodshed. New barn, 40x80; 26x30, condition good; granary; poultry house, etc. House watered by well and cistern; barns by pond, water pumped in; fields by brooks. Occupied by owner. Reason for selling, owner can not work. Price, $4,000. Terms, part cash, remainder on mortgage. Address Judson A. Musson, owner, Mount Upton, N. Y., Chenango Co.

No. 451.— Farm of 105 acres; located 2½ miles from postoffice at Gilbertsville; 3 miles from railway station at Rockwells Mills, on line of O. & W. R. R.; ⅛ mile from school; 2½ miles from churches and butter factory; 4 miles from condensing plant. Nature of highways, hilly, good. Nearest city, Norwich, population 8,342, distant 12 miles, reached by highway. Surface of farm slopes to west. Altitude, 1,500 feet. Nature of soil, red shale, good. Acres that can be used as meadow, 60; number now so used, 35; in natural pasture, 50; in timber, 20, second growth chestnut and hard wood. Acres tillable, 75. Fruit trees, 75 apple and a few pear. Adapted to hay, corn, oats, and potatoes. Wire and rail fences in fair condition. Sixteen-room house in good condition; horse barn, 30x40 feet, fair condition; cow barn, 30x40 feet; fair granary, hay barn; woodshed. House and barns watered by wells; fields by springs and brook. Unadilla River 2 miles distant. Occupied by tenant. Reason for selling, other business. Price, $2,200. Terms, $1,200 cash, balance on mortgage. This farm lies beside another of 113 acres owned by same parties, also for sale. Are now being worked together as one farm. Address Wm. A. Hakes and Gertrude H. Musson, Gilbertsville, N. Y.

No. 452.— Farm of 113 acres; located 2½ miles from Gilbertsville postoffice; 3 miles from railway station at Rockwells Mills, on line of O. & W. R. R.; ¼ mile from school; 2½ miles from churches and butter factory; 4 miles from condensing plant. Highways, hilly, good. Nearest city, Norwich, population 8,342, distant 12 miles, reached by highway. Surface of farm, sloping to west. Altitude, 1,500 feet. Nature of soil, red shale, good. Acres that can be used as meadow, 60; number now so used, 40; in natural pasture, 60; in timber, 13, hardwood, chestnut, pine. Acres, tillable, 60. Fruit trees, 100 apple, 10 pear, a few plum, cherry; and grape vines. Adapted to hay, corn, oats and potatoes. Stone, wire and rail fences in fair condition. Fifteen-room house in good condition. Cow barn, 30x52, with basement; ell, 20x40; horse barn, 30x40, with basement; hog and poultry house, 20x30; woodhouse. House watered by well and cistern; barns by well and spring; fields by brook and springs. Unadilla river 2 miles distant. Occupied by tenant.

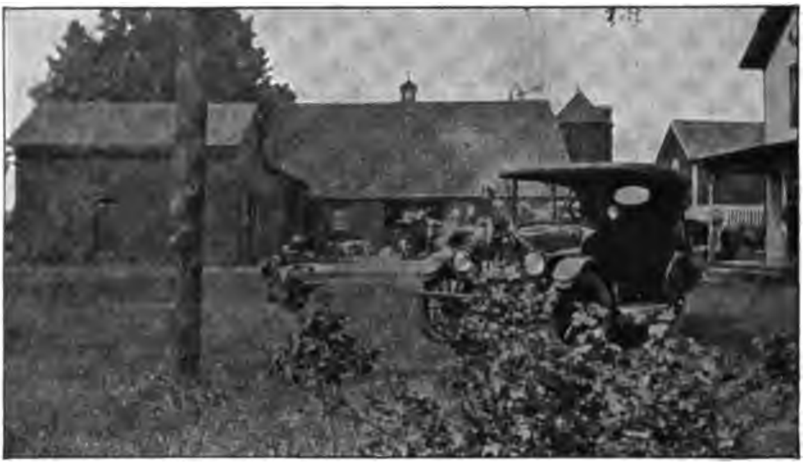


FIG. 52.— ONE OF THE LARGE BARNS WITH SILO, ON FARM NO. 431, TOWN OF PALERMO, OSWEGO COUNTY.

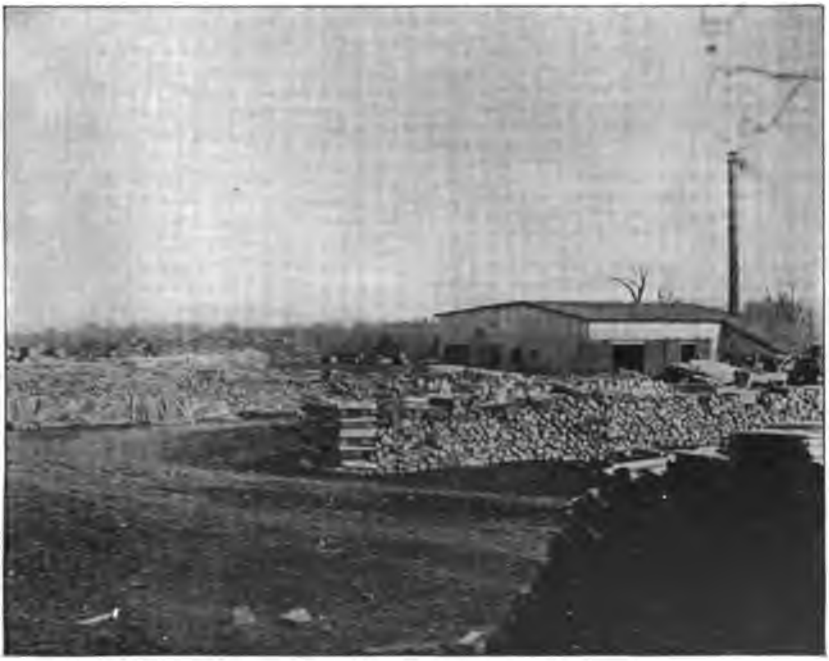


FIG. 53.— SAWMILL AND COOPERAGE PLANT ON FARM NO. 431, TOWN OF PALERMO, OSWEGO COUNTY.

Price, $3,000. Terms, $1,500 cash, balance on mortgage. Address Wm. M. Hakes and Gertrude H. Musson, Gilbertsville, N. Y.

TOWN OF CHERRY VALLEY

Population 1,544

No. 453.— Farm of 100 acres; located 2 miles from Cherry Valley, on line of D. & H. R. R.; 1 mile from school; 2 miles from churches, cheese factory and milk station. Highways, fair. Nearest large village, Cooperstown, population, 2,634, 12 miles distant, reached by highway. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, 60; in natural pasture, 40. Acres tillable, 70. Fruit, plum trees. Best adapted to hay and grain. Fences, barbed wire, in good condition. House for 2 families. Barn 60x40. Watered, house, barn and fields by springs. Reason for selling, other business. Price, $1,500. Terms, $1,000 cash and remainder on mortgage. Address, George O. Walrad, owner, Cherry Valley, N. Y.

No. 454.— Farm of 300 acres; located 2½ miles from Cherry Valley, on line of D. & H. R. R.; 2½ miles from school, churches, butter factory, milk station and condensing plant and 2 miles from cheese factory. Highways, good. Nearest village, Cherry Valley, population, 762, 2½ miles distant, reached by highway. General surface, rolling and level. Nature of soil, limestone. Acres that can be used as meadow, about 60; in natural pasture, about 60; in timber 100, hemlock, beech and maple. Acres tillable, 260. Fruit, 2 apple orchards. Adapted to grain, hops, peas, beans, hay, potatoes and corn. Fences, stone and some wire. House, large and in good condition. Outbuildings in good condition. Watered, house by well; barns and fields by creek. Occupied by owner. Price, $7,000. Terms, $5,000 cash, balance on mortgage. Address, Harry Giles, owner, Cherry Valley, N. Y.

TOWN OF EDMESTON

Population 1,682

No. 455.— Farm of 42 acres; in village of Edmeston, on line of N. Y., O. & W. R. R.; graded school; Baptist and Methodist churches; condensing plant in village. State road. Nearest cities, Oneonta and Norwich, reached by rail or highway. Surface of farm, part level and part rolling. Altitude, 1,232 feet. Soil, clay loam, very strong soil. Acres in meadow, 25; in natural pasture, 17; all tillable. Fruit, 20 apple trees, winter and fall varieties. Adapted to corn, oats, potatoes, beans, peas and hay. Fences, board and wire, in good condition. Large 2-story house, with 2 wings, hot water heat, hot and cold water throughout, $1,500 in plumbing, nicely painted, large lawn. Barns: 84x40, slate roof, cost $2,000 to build, modern; another barn, 30x40, fine repair; large granary, in fine repair. Watered, house, by city water; barns, by running water; fields, by running water and living spring. Occupied by tenant. Reason for selling, owner has business interests elsewhere. Price, $8,000. Terms, $4,000 cash, balance long term of years at 5 per cent. Address A. H. Medbury, owner, Capac, Mich.

No. 456.— Farm of 150 acres; 3 miles from Edmeston P. O. and railway station, on line of O. & W. R. R.; ½ mile from school; 3 miles from churches, butter factory and milk station. Highways, good, on a grade, but not bad hills. Nearest village, Edmeston, population, 749, 3 miles distant, reached by highway. Surface of farm, meadows slope to east. Soil, very productive. Acres in meadow, 40; in natural pasture, 70; in timber, 40, maple, beech and hemlock. Acres tillable, 60. Fruit, fairly good orchard of 40 trees, various kinds. Best adapted to corn, oats and hay. Fences, mostly barbed wire, in good condition. Fourteen-room house, in good condition. New barn, 32x70, with concrete floor, swing stanchions for 30 head; 2 box stalls, 4 horse stalls, roofed with best grade of metal shingles; silo; 4 other buildings. Watered, house by spring; fields, by never-failing springs. Occupied by tenant. Reason for selling, owner has other business. Price, $4,500. Terms, $1,500 cash, balance 5 years at 5 per cent; or $4,000 cash. Address Clarence Talbot, owner, Edmeston, N. Y.

No. 457.— Farm of 200 acres; located 1½ miles from West Edmeston P. O., R. D. No. 2, and railway station, on line of Unadilla Valley R. R.; 4½ miles from railway station at Edmeston, on line of O. & W. R. R.; ½ mile from school; 1½ miles from churches; 1½ miles from milk station and condensing plant. Surface of farm, rolling. Altitude, 1,350 feet. Nature of soil, clay loam. Acres that can be used as meadow, 60; in natural pasture, 90; in timber, 50, hardwood, hemlock and basswood. Acres tillable, 100. Fruit, 50 apple, 10 pear, 3 cherry and 2 plum trees. Best adapted to hay, oats, corn and potatoes. Fences, wire, in good condition. Twenty-one room house, suitable for 2 families, in fine condition. Outbuildings: cow barn, 30x80; horse barn and wagon house, 24x50; wood house, 30x30; poultry and hog house, 18x40; granary, mill house and ice house, all in good condition. House watered by running water, spring in cellar; barns, by running water in yard, and fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, $5,500. Terms, $1,800 cash, balance on mortgage. Address Frank Wright, owner, Edmeston, N. Y., R. D. No. 2.

No. 458.— Farm of 83 acres; located 3 miles from Edmeston postoffice, R. D. No. 2; 3½ miles from railway station at Edmeston on line of O. & W. R. R.; ½ mile from school; 3 miles from churches; 3½ miles from cheese factory, milk station and Borden's milk bottling plant. Good highways. Nearest village, Edmeston, population about 700, distant 3 miles; reached by highway. General surface of farm, rolling. Altitude, 1,500 feet. Good gravelly soil, well watered. Acres that can be used as meadow, 54; in natural pasture, 25; in timber, 4, hemlock, beech an' maple; number tillable, 54. Twelve apple trees. Best adapted to grass and oats. Wire fences in fair condition. Two-story frame house, 30x20; wing, 20x30, in fair condition. Basement barn, 30x56; horse barn, 20x30, in fair condition. Barn and house lighted by acetylene plant on farm. House watered by well; barns by running brook 300 feet from barn; fields by running water. Summit Lake 2½ miles distant. Farm now occupied by owner. Reason for selling, death of wife and more land than owner cares to work. Price, $4,500. Terms, $1,500 down. Will rent with option to buy. Address W. D. Boutwell, owner, Edmeston, N. Y.

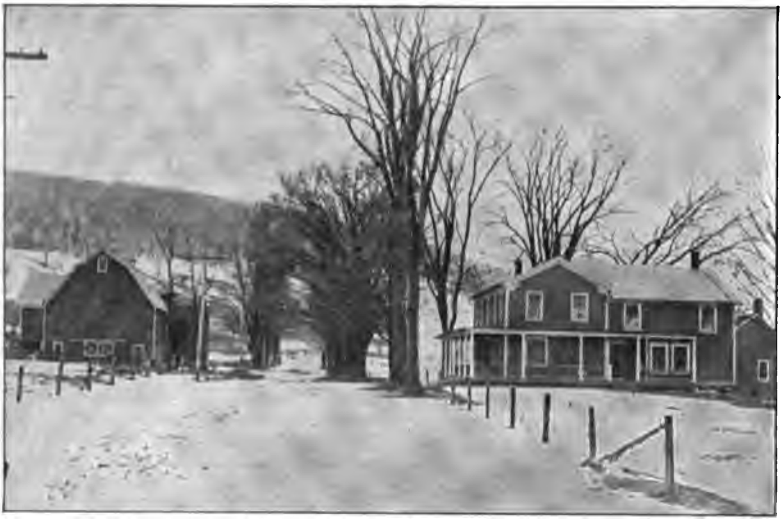
TOWN OF EXETER

Population 967

No. 459.— Farm of 120 acres; located 2 miles from postoffice at Exeter Center; 4½ miles from railway station at Schuyler Lake, on line of O. & H. R. R.; ¾ mile from school; 2 miles from churches; 4 miles from milk station. Highways generally good. Nearest village, Richfield Springs, population 1,623, distant 8 or 9 miles, reached by trolley line and highway. General surface of farm, rolling and gradually sloping. Good fertile soil. Acres that can be used as meadow 70; acres now used as meadow, 50; in natural pasture, 60; in timber, 10, hardwood. Acres tillable, 70. Fruit, 25 apple trees. Best adapted to hay, grain, potatoes, corn, hops. Barbed wire fences in good condition. Frame house of 1½ stories, in good condition; wing, 20x30. Barn, 30x40; another, 20x30 in fair condition; hop kiln and other buildings. House and barns watered by wells; fields by spring and creek. Farm now unoccupied. Reason for selling, owner unable to work farm. Price, $2,500 with hay; terms cash, $500 to $100 and rest on mortgage. Address Ella Horan, Richfield Springs, N. Y., R. D. 5.

No. 460.— Farm of 13 acres, adjoining the village of Exeter Center; 2 miles from Schuyler Lake, on line of O. & M. V. R. R.; store and post-office on the land; close to good school and churches. Very desirable property for summer home. On a good road, in a fine location. Five acres of orchard. Very fertile soil. Fences, wire, good. House, 2 stories, in good condition, 35x40, with wing, 20x30. Barn, good, 35x65, with new addition; other outbuildings, poultry house, etc. Watered by springs, well and brook. Reason for selling, to settle estate. Price, $4,000. Terms, $2,000 cash, balance on time. Address Mrs. Katie Horan, owner, Exeter, N. Y.

No. 461.— Farm of 100 acres; located 3 miles from postoffice (R. D. No. 1) at Burlington Flats; 6 miles from railway station at Schuyler Lake, on line of Oneonta & Utica Ry.; 1 mile from school, butter and cheese factories; 3 miles from churches; 2 miles from milk station and condensing plant. Highways, good dirt road, 1 mile to macadam road. Nearest village, Edmeston, population about 1,200, distant 7 miles, reached by highway. General surface of farm, rolling. Altitude, 1,200 feet. Soil rich alluvial loam. Acres that can be used as meadow, 45; in natural pasture, 60; in timber, 6, hardwood. Acres tillable, 60. Fruit, 100 apple and 2 pear trees. Best adapted to dairying, wheat,



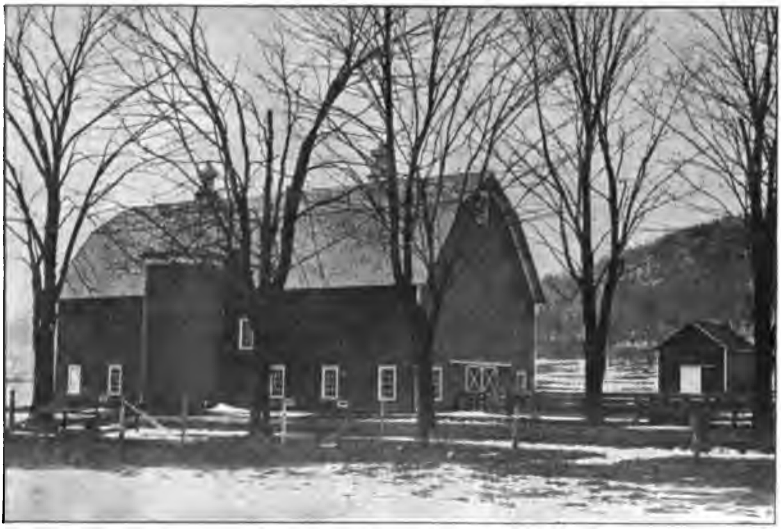


FIG. 54.— BUILDINGS ON FARM NO. 483, TOWN OF WESTFORD, OTSEGO COUNTY.

corn, etc. Mostly wire fences in good condition. House about 20x30, in good livable condition. Large basement barn, 28x68; barn, 28x30; hog house, 20x25. House watered by well; barns by running water; fields by brook and springs. Farm now occupied by owner. Reason for selling, old age. Price, $3,000. Terms, $500 at time of sale, $300 yearly. Will rent with option to buy. This farm is well adapted for a dairy of 25 cows or for fruit. Address A. M. Hollister, Corinth, N. Y.

TOWN OF LAURENS

Population 1,410

No. 462.— Farm of 192 acres; located 2 miles from Mt. Vision P. O., and railway station, on line of O. & H. R. R.; 1 mile from school; 2 miles from churches; 2 miles from butter factory and 1 mile from milk station. Highways, good. Nearest city, Oneonta, population, 10,474, 7 miles distant, reached by rail or highway. General surface, slightly rolling and part level. Altitude, 1,470. Nature of soil, dark and yellow clay. Acres that can be used as meadow, 140; now used as meadow, 125; in natural pasture, 40; in timber, 27, pine, hemlock and maple. Fruit, 125 apple, 2 pear and 4 plum trees and 20 currant bushes. Adapted to barley, oats, potatoes, buckwheat and hay. Fences, woven wire, excellent. Ten room house, good condition. Outbuildings: stock barn, 36x100; sheep barn, 16x100; 2 poultry houses and a 2 story granary. Watered, house, by running water; barns, by spring; and fields by spring. Occupied by owner. Reason for selling, desires large farm. Price, $6,000. Terms, $4,500 cash, balance on mortgage. Address N. Worm, owner, Oneonta, N. Y.

No. 463.— Farm of 101 acres; 2 miles from Laurens P. O. and railway station on line of Oneonta & Mohawk Electric R. R.; 2 miles from church and milk station; 1 mile from school. Highways, good. Nearest city, Oneonta, population 10,474, 10 miles distant, reached by rail or highway. Surface, rolling. Soil, good mellow loam. Acres in meadow, 50; in natural pasture, 45; in timber, 15, pine, hemlock, beech and maple. 125 apple and 2 pear trees. Best adapted to corn, oats and potatoes. Fences, wire, in good condition. House, 16x40; wing, 24x32; summer kitchen, 16x16, in good condition. Barn, 44x74. Watered, house, by pump; barns, by running water; fields, by springs and creek. About $1,500 worth of timber on the place. Reason for selling, ill health. Price, $4,000. Terms, $2,000 cash, balance on mortgage. Address A. H. Knight, owner, Laurens, N. Y.

No. 464.— Farm of 86 acres; located 4 miles from Laurens P. O., R. D. 1, and railway station, on line of Otsego & Herkimer R. R.; ½ mile from school; 3 miles from churches; 4 miles from milk station; 3 miles from cheese factory. Highways, good. Nearest city, Oneonta, population 10,474, 12 miles distant, reached by rail and highway. Surface of farm, level. Altitude, about 1,700 feet. Soil, some fair, some good. Acres in meadow, 36; in natural pasture, 38; in timber, 12, beech and maple. Acres tillable, 70. Fruit: apples, pears, plums, cherries and grapes. Best adapted to hay, grain and potatoes. Fences, wire and stone wall, fair condition. House, 30x34, 2 stories. Outbuildings: barn, 36x38, with stone basement; poultry house, 20x40; wood shed, 12x24; granary, 20x35. Watered, house, by running water; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $2,500. Terms, ½ down, balance on time. Address C. A. Brownell, owner, Laurens, N. Y., R. D. 1.

No. 465.— Farm of 202 acres; located 7½ miles from postoffice at Oneonta; 7½ miles from railway station at Oneonta, and 3½ miles from West Oneonta on lines of Otsego & Herkimer Electric Ry., D. & H. R. R., U. & D. R. R.; ½ mile from school, churches and butter factory; 3½ miles from milk station. Highways, excellent, new macadam state road. Nearest city. Oneonta, population 10,474, distant 7½ miles, reached by state road, also trolley 4 miles of the way. General surface of farm, meadow level and rolling, pasture hilly to rolling and level. Altitude about 1,400 feet. Nature of soil, alluvial and volusia silt loam. Acres used as meadow, 80; in natural pasture, 74; in timber, 48; 28 acres of mostly sugar maples; 20 acres thrifty white pine 20 years old fine stand. Acres tillable, 100. Twenty-five apple trees, grafted to winter fruit. Adapted to hay, potatoes, rye, cabbage, hops, corn. Barbed wire and rail fences. Seven-room house in good condition. Barn, 36x60 feet, basement concreted throughout, built about 10 years ago, in fine condition; hen house well preserved. House watered by well; brook runs by barn; fields watered by trout brook. Susquehanna river 7 miles distant; several small lakes within radius of 10 miles. Farm now vacant. Reason for selling, physical disability. Price, $6,000. Terms, $2,500 cash, remainder on mortgage. Address H. G. Strait, U. S. Dept. of Agriculture, Office Farm Management, Washington, D. C.

TOWN OF MARYLAND

Population 1,731

No. 466.— Farm of 225 acres; located 1 mile from Schenevus P. O., R. D. 1; 1¼ miles from railway station at Schenevus on line of D. & H. R. R.; 1 mile from high school; ⅛ mile from country school; 1 mile from churches; 1¼ miles from milk station; 5 miles from cheese factory. Highways, level, state road. Surface of farm, level and rolling. Altitude, 1,300 feet. Soil, sandy loam. Acres in meadow, 110; in natural pasture, 80; in timber, 35, mixed; acres tillable, 190. Fruit, apples. Adapted to all crops grown in this climate. Fences, mostly wire, good condition. House, large, good condition. Old style, roomy barns. Milk house, wagon house, hop kiln and large silo. Watered, house and barns by running spring water; fields, by springs and streams. Occupied by tenant. Reason for selling, to close an estate. Price, $10,000. Terms, ½ cash, balance on mortgage. Address S. Hubbard Estate, Schenevus, N. Y.

TOWN OF MIDDLEFIELD

Population 1,671

No. 467.— Farm of 173 acres; located 3 miles from Middlefield; 5 miles from Cooperstown, on line of D. & H. R. R.; 1 mile from school, churches and butter factory; 3 miles from cheese factory and 5 miles from milk station and condensing plant. Highways, fair. Nearest village, Cooperstown, population, 2,634, 5 miles distant, reached by highway. General surface, rolling and level. Nature of soil, gravelly and stony loam. Acres that can be used as meadow, 148; in timber, 25, maple, hemlock, beech, oak and basswood. Acres tillable, 148. Fruit, apples and plums. Adapted to potatoes, corn, oats, barley, buckwheat and hay. Fences, wire in fair condition. House, 9 rooms, in fair condition. Outbuildings: basement barn 35x70, hay barn 30x40, 2 hog houses, poultry house and hop house 30x40. Watered, barn and house by spring; fields by stream and spring. Occupied by tenant. Reason for selling, ill health. Price, $2,600. Terms, $1,600 cash and remainder on mortgage. Address Ida Edick Gray, owner, East Springfield, N. Y. Owner will rent.

TOWN OF MORRIS

Population 1,367

No. 468.— Farm of 100 acres; located 2½ miles from Morris P. O.; 4½ miles from railway station at New Berlin, on line of N. Y. O. & W. and U. V. R. Rs.; 1 mile from school; 2½ miles from church, butter factory and cheese factory; 4½ miles from milk station and condensing plant. Highways, hilly but good. Nearest city, Norwich, population 8,342, 14 miles distant, reached by rail and highway. General surface, hilly. Altitude, 1,800 feet. Acres in meadow, 50; in natural pasture, 45; in timber, 5, hemlock and hardwood. Acres tillable, 90. Fruit, 30 apple trees and some pears. Adapted to corn, hay, oats, buckwheat, etc. Fences, wire and rail, good condition. House, 8 rooms, fair condition. Outbuildings: basement barn, 62x30, good condition; poultry house, good condition. House watered by spring; fields, by spring. Occupied by owner. Price, $2,000. Terms, half cash, balance on mortgage. Address W. M. Lampher, owner, Morris, N. Y.

No. 469.— Farm of 133 acres; located 3½ miles from South New Berlin P. O., R. D. No. 1, and railway station, on line of N. Y. O. & W. R. R.; 1 mile from school; 3½ miles from churches and butter factory; 1½ miles from cheese factory and 3½ miles from milk station. Highways, hilly, good condition. Nearest city, Norwich, population 8,342, 10½ miles distant, reached by highway. General surface, rolling. Altitude, 1,700 feet. Nature of soil, red clay loam Acres in meadow, 50; in natural pasture, 30; in timber, 33, 20 acres of hemlock and hardwood, 200 young sugar maples and 13 acres of second growth timber Acres tillable, 70. Fruit, 6 pear, 12 cherry, 4 plum and 20 apple trees and 3 grape vines. Best adapted to potatoes, corn, grain and hay. Fences, mostly barbed wire, good condition. Large house in good condition. Outbuildings: barns, in good condition, newly built lean-to, cow stable for 18 head of stock, large horse barn, wagon house, milk house, 2 poultry houses, 2 silos and granary. House watered by well, barns by spring and well, and fields by springs. Occupied by owner. Reason for selling, other business. Price, $3,000. Terms, cash. Address George H. Wells, owner, South New Berlin, N. Y.

No. 470.— Farm of 80 acres; located 7 miles from Laurens P. O., R. D. No. 1, and railway station, on line of O. & H. trolley; ½ mile from school; 2½ miles from churches; ½ mile from butter factory; 2½ miles from cheese factory; 10 miles from milk station and condensing plant. Highways, hilly but good. Nearest city, Oneonta, population 10,474, 12 miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,825 feet. Nature of soil, clay loam. Acres in meadow, 35; in natural pasture, 30; in timber, 15, hardwood. Acres tillable, 60. Fruit, a few pear, apple and plum trees. Adapted to hay, corn, oats, potatoes, buckwheat and peas. Fences, mostly wire, good condition. House, 9 rooms, good condition. Outbuildings: basement barn, 36x46; silo; 3 poultry houses, 12x12, 12x30 and 14x20; granary, 12x14, all in fair condition. House watered by well, barns by well, and fields by springs. Occupied by owner. Reason for selling, other business. Price, $2,000. Terms, $1,200 cash, balance on mortgage. Address A. E. Eaton, owner, R. D. No. 1, Laurens, N. Y.

No. 471.— Farm of 50 acres; located 1½ miles from Morris P. O.; 5 miles from railway station at New Berlin, on lines of N. Y. O. & W. and U. V. R. Rs.; 1½ miles from school, churches, butter factory and cheese factory; 5 miles from milk station and condensing plant. Highways, good hill roads. Nearest city, Oneonta, population 10,474, 14 miles distant, reached by highway. General surface, rolling. Altitude, 1,300 feet. Nature of soil, clay loam. Acres in meadow, 30; in natural pasture, 15; in timber, 5, hardwood and hemlock. Acres tillable, 50. Fruit, large apple orchard, 6 pear trees. Adapted to all crops. Fences, wire and board, fair condition. House, 12 rooms, good condition. Outbuildings: 2 barns, cattle shed, shop and hop kiln, all in fair condition. House watered by well, barns by well and brook, fields by brook. Occupied by tenant. Reason for selling, to settle an estate. Price, $1,000. Terms, half cash. Address Julia A. Winton, owner, Morris, N. Y. Will rent.

No. 472.— Farm of 115 acres; located 1½ miles from Morris P. O., R. D. 1; 9 miles from railway station at New Berlin, on line of Ontario & Western R. R.; 1½ miles from school and churches; 1½ miles from butter and cheese factory and milk station. Nearest city, Oneonta, 14 miles distant, population, 10,474. General surface, level. Altitude, 1,160 feet. Acres in meadow, 35; in pasture, 60; in timber, 20, beech, ash and basswood; acres tillable, 50. Fruit, over 25 apple trees. Best adapted to corn and grains. Fences, barbed wire, fair condition. House, 12 rooms, large woodshed, good condition. Outbuildings: main barn, 30x60; wagon house, 20x30. Sheds, straw barn, granary, all in good condition. House watered by spring and wells; barns, by springs; fields, by brook and spring. Occupied by owner. Price, $4,000. Terms, ½ cash, balance to suit purchaser. Address Galen F. Lull, owner, Morris, N. Y.

TOWN OF NEW LISBON

Population 976

No. 473.— Farm of 154 acres; located ¾ mile from Garrettsville P. O.; 5 miles from railway station at Edmeston, on line of N. Y., O. & W. R. R.; ¾ mile from school and churches; 5 miles from milk station and condensing plant. Highways, good. General surface of farm, fairly level. Altitude, 1,500 feet. Soil, loam. Acres that can be used as meadow, 70; in natural pasture, 64; in timber, 20, beech, birch and maple. Acres tillable, 70. Fruit, 40 apple, 3 pear, 6 plum trees, grapes, currants, gooseberries, strawberries and blackberries. Best adapted to oats, corn, buckwheat and potatoes. Fences, mostly wire, in good condition. House, 26x34, 1½ stories, just completed. Outbuildings: barn, 32x52, with leanto; barn, 21x30; hog house, new poultry house for 250 hens; all buildings in good repair. House watered by never-failing well, fields by springs and creeks. Occupied by owner. Reason for selling, unable to work farm. Price, $4,000. Terms, easy. New 8-room house, all hardwood floors, finished in pine throughout, heated by furnace. Address Mrs. W. I. Smith, owner, Garrettsville, N. Y.

No. 474.— Farm of 202 acres; located 2 miles from New Lisbon P. O., and 4 miles from railway station at Mt. Vision, on line of O. & H. R. R.; ¾ mile from school; 1½ miles from church; 1 mile from butter factory and cheese factory and 4 miles from milk station. Nearest city, Oneonta, population 10,474, 14 miles distant, reached by rail and highway. Surface of farm, quite level. Altitude, 1,700 feet. Soil, loam. Acres that can be used as meadow, 80; in natural pasture, 80; in timber, 40, hemlock, ash, pine, beech and maple. Acres tillable, 150. Fruit, a good apple orchard of 75 trees and some pear trees. Adapted to corn, oats, buckwheat, potatoes, etc. Fences, wire, good condition. House, 26x36, good condition. Outbuildings: basement barn, 32x50; horse barn, with basement, 30x40; hop kiln. House watered by wells, barns by springs, and fields by spring, brooks and creek. Occupied by owner. Reason for selling, unable to work farm. Price, $4,000. Terms, easy. There is enough timber to pay for place. Address W. I. Smith, owner, Garrettsville, N. Y.

TOWN OF OTEGO

Population 1,521

No. 475.— Farm of 75 acres; located 2 miles from postoffice at Otego (R. D. No. 4); 2 miles from railway station on line of D. & H. R. R.; 100 rods from school; 2 miles from churches, milk station, butter factory and condensing plant; 4 miles from cheese factory. Highways, state road, good grade. Nearest city, Oneonta, population 10,474, distant 9 miles, reached by rail and highway. General surface of farm, upland rolling, some river flats. Altitude, 900 feet. Nature of soil, loam. Acres that can be used as meadow, 50; number now so used, 40; in natural pasture, 32; in timber, 3, chestnut, maple and oak. Acres tillable, 60. Apple orchard; small fruits of all kinds; also grapes. Adapted to corn, oats, alfalfa, hops and potatoes. Very good fences, some wire. House, upright and wing, in good condition. New basement barn, concreted stanchions for 18 head cattle; 6 horse stalls; wagon house; all under one roof. Good hen house, 30x16; 3 hen houses, 12x8. Running water in house and barn. Fields watered by springs. Farm bounded on south by Susquehanna river. Occupied by owner. Reason for selling, old age. Price, $5,500. Terms, half down, balance on easy terms. Address John M. Leonard, owner, Otego, N. Y., R. D. 4.

TOWN OF PITTSFIELD

Population 965

No. 476.— Farm of 145 acres; 6 miles from New Berlin, on line of N. Y., O. & W. and U. V. R. Rs.; ½ mile from school; 3½ miles from churches, butter factory and cheese factory, and 6 miles from condensing plant. Nature of highways, hilly. Nearest village, New Berlin, population 1,131; distance, 6 miles. General surface, rolling. Altitude, 1,500 feet. Acres used as meadow, 50; in natural pasture, 50; in timber, 45, hemlock, hard woods. Acres tillable, 100. Fruit, small orchard. Adapted to all kinds of crops. Wire and rail fences. House, 8 rooms, in fair condition. Small barn. House watered by well; barns and fields, by spring. Occupied by owner. Reason for selling, other business. Price, $2,200. Terms, half cash, balance, mortgage. Address Geo. Whitman, owner, Morris, N. Y.

No. 477.— Farm of 98 acres; located 5 miles from railway station at New Berlin, on O. & W. R. R.; 1/6 mile from school and church; 5 miles from butter factory and milk condensing plant; 4 miles from cheese factory. Highways, hilly but good. Nearest city, Oneonta, population, 10,474, 18 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,300 feet. Soil, loam. Acres in meadow, 25; in natural pasture, 50; in timber, 23, hemlock, maple and beech. Acres tillable, 50. Fruit: apples, pears, plums, cherries, etc. Adapted to corn, potatoes, oats, peas and buckwheat. Fences, mostly wire, good condition. House, 20x26, with wing, 18x30. Basement barn, 34x60, good condition. Watered by well, spring and creek. Occupied by tenant. Reason for selling, ill health. Price, $1,600. Terms, half down, balance on mortgage. Address David H. Webster, owner, New Berlin, N. Y., R. D. No. 3.

No. 478.— Farm of 282 acres; located 3 miles from New Berlin P. O., R. D. 5 and railway station on line of N. Y. O. & W. R. R.; ¾ mile from school; 3 miles from churches, milk station and condensing plant. Highways hilly. General surface of farm, rolling. Altitude, 1,650 feet. Nature of soil, loam. Acres in meadow, 50; in pasture, 100; in timber, 50, beech, birch, maple, ash and hemlock. Acres tillable, 175. Fruit, 120 trees, apples and plums. Adapted to hay, corn, hops, potatoes and buckwheat.

Fences, wire, good. House, 1½ stories, 11 rooms, painted, 2-family. Outbuildings: basement barn, 26x102; wagon house, 24x40; granary, 14x20; milk house, shop, poultry house, ice house and store house. House watered by pump, barns by running water, fields by spring and brook. Occupied by owner. Reason for selling, ill health. Price, $4,200. Terms, ¼ cash, with $100 yearly and interest semi-annually at 5 per cent. Address Aden J. Angell, owner, New Berlin, N. Y.

TOWN OF RICHFIELD

Population 2,419

No. 479.— Farm of 323 acres; located 2 miles from Richfield P. O.; 4 miles from East Winfield on line of D. L. & W. R. R.; ¾ mile from school; 2 miles from churches and cheese factory; 4 miles from milk station. Highways, quite hilly. Nearest village, Richfield Springs, population 1,623, 5½ miles distant, reached by highway. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 100; in natural pasture, 150; in timber 60, maple, beech, basswood and elm. Acres tillable, 100. Fruit, 60 apple, 6 pear, 7 plum and 12 cherry trees. Adapted to hay, oats, barley and corn. Fences, mostly wire, in fair condition. House, large, stone, in fair condition. Outbuildings: basement barn 90x36, horse barn 30x36, and wagon barn, 27x30. Watered, house by well and cistern; fields by springs and stream. Occupied by owner. Reason for selling, to settle an estate. Price, $7,500, with tools and supplies $10,000. Terms, cash. Address Arthur D. Fenton, owner, Richfield, N. Y.

TOWN OF ROSEBOOM

Population 867

No. 480.— Farm of 117 acres; located ½ mile from South Valley; 6 miles from Seward, on line of D. & H. R. R.; ½ mile from school, churches and milk station. Highways, good. General surface, rolling. Altitude, 1,600 feet. Nature of soil, gravelly loam. Acres that can be used in meadow, 65; in natural pasture, 26; in timber 26, hemlock, maple, beech, birch and ash. Acres tillable, 65. Fruit: 20 apple, 15 plum, pear and 15 cherry trees. Adapted to oats, barley, buckwheat and corn. Fences, stone and wire. House, 24x32. Outbuildings: barn, 50x 38, wagon house 24x40, barn 24x36, shed 20x30 and poultry house 10x20. Watered house and barns by well; fields, by creek. Occupied by owner. Reason for selling, ill health. Price, $3,000. Address Geo. Bassler, owner, South Valley, N. Y.

No. 481.— Farm of 101¾ acres; located 3 miles from postoffice at Dorloo; 4 miles from railway station at Seward, on line of D. & H. R. R.; ½ mile from school; 3 miles from churches; 4 miles from milk station. Highways, main road good. Nearest large village, Cooperstown, population 2,634, distant 14 miles, reached bv rail and highway. General surface of farm, meadow level, pasture highland. Altitude, 1,200 feet. Nature of soil, clay and gravel. Acres that can be used as meadow, about 50; in natural pasture, about 30; in timber, about 20, hardwood, hemlock and basswood. Acres tillable, 70. Apple orchard. Adapted to any crop raised in Central New York. Barbed wire fences. Medium sized house. Large barn. House watered by spring and well; barn by running water; fields by springs and creeks. Price, $2,500. Terms, $1,000 down. Reason for selling, old age of occupant. Address M. B. Allen, owner, East Worcester, N. Y.

TOWN OF WESTFORD

Population 773

No. 482.— Farm of 126 acres; located 1 mile from Westford; 8 miles from Schenevus, on line of D. & H. R. R.; ¾ mile from school and cheese factory, 1 mile from church, and 8 miles from milk station. Highways, state road. Nearest village, Worcester, population, 1,020, 6 miles distant, reached by highway. General surface, rolling and level. Altitude, 1,560 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 65; now used as meadow, 40; in natural pasture, 40; in timber, 20, maple, beech and hemlock. Acres tillable, 85. Fruit, apples, plums and pears. Adapted to corn, potatoes, cabbage, hay and oats. Fences, wire, in fair condition. House, 28x30, wing 18x28, 14 rooms, in good condition. Outbuildings: barn, 36x82, stable 18x32 with concrete floor and room for 30 cattle, horse barn 24x60 and hog house 22x30. Watered, house and barns by spring; fields by creek and spring. Occupied by owner. Reason for selling, ill health. Price, $4,500. Terms, $2,500 cash and remainder on mortgage. Address Joseph Esmay, owner, Westford, N. Y.

No. 483.— Farm of 174 acres; located 3 miles from Milford, on line of D. & H. R. R.; 1 mile from school, churches, butter factory and cheese factory and 3 miles from milk station. Highways, good. Nearest village, Milford, population 560, 3 miles distant, reached by highway. General surface, rolling. Nature of soil, gravel and loam. Acres that can be used as meadow, 75; in natural pasture, 75; in timber, 24, hemlock, chestnut, beech and maple. Acres tillable, 150. Fruit, 50 apple trees. Adapted to corn, oats, potatoes, hay and hops. Fences, wire, in good condition. House, 13 rooms, in good repair. Tenant house in good condition. Outbuildings: barn 40x90, in excellent condition; silo. Watered, house and barns by running water; fields by springs and streams. Occupied by owner. Reason for selling, ill health. Price, $13,500. Terms, $8,000 cash and balance on mortgage. Address Owen Eckler, owner, Schenevus, N. Y.

No. 484.— Farm of 100 acres; located 2 miles from Westford P. O.; 9 miles from railway station at Schenevus, on line of Delaware & Hudson R. R.; 2 miles from school, churches, butter factory and cheese factory. Nearest village, Worcester, population 1,020, 7 miles distant, reached by highway. General surface, part hilly. Acres now used as meadow, 11; in natural pasture, 5; in timber, 15, beech and maple: Acres tillable, 70. Fruit for home use. Adapted to corn, potatoes, oats, buckwheat and cabbage. Fences, fair condition, stone, board and wire. House, 6 rooms in good condition. Outbuildings: 2 large barns, and poultry house, good condition. Watered, house, by well and fields by spring. Occupied by owner. Reason for selling, ill health. Price, $50 per acre. Address, C. Hesse, owner, Westford, N. Y.

No. 485.— Farm of 130 acres; located 7 miles from Schenevus, on line of D. & H. R. R.; 1 mile from churches and milk station. Highways, state road. Nearest city, Oneonta, population, 10,474, 22 miles distant, reached by highway. Acres now used as meadow, 40; in timber, 25, hemlock and hardwood. Fruit, 75 apple, 5 cherry, 25 plum trees and some berries. Adapted to potatoes, corn and oats. Fences, wire, in fair condition. House, 12 rooms, in good condition. Barn 36x48, cow stable, 38x40, with concrete floor and silo 12x28. Watered, house by well; barns, by running water; and fields by brooks and springs. Occupied by owner. Reason for selling, ill health. Price, $4,500. Terms, $2,500 cash, balance on mortgage at 5 per cent. Address William Groff, owner, Westford, N. Y.

No. 486.— Farm of 100 acres; located 1 mile from Westford P. O.; 6 miles from railway station at Worcester, on line of D. & H. R. R.; 1 mile from school, churches and cheese factory; 6 miles from milk station. Highways, state road. Nearest city, Oneonta, population 10,474, 18 miles distant, reached by highway. General surface, rolling and hilly. Acres that can be used as meadow, 70; now used as meadow, 30; in natural pasture, 10 and in timber, 20, hard maple and hemlock. Acres tillable, 60. Fruit, 70 apple, 2 pear and 3 cherry trees. Adapted to oats, barley, corn, buckwheat and potatoes. Fences, barbed wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: basement barn, 52x26, cow stable, 52x12, horse stable, 28x16, granary, poultry house and hog house. Watered, house by running water; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $2,000. Terms, ½ cash, balance on mortgage. Address John R. Skinner, owner, Westford, N. Y. Will rent.

No. 487.— Farm of 211 acres; located 1 mile from Westford P. O.; 8 miles from railway station at Schenevus on line of Delaware & Hudson R. R.; 1 mile from school, churches and cheese factory. Highways, state road. Nearest village, Worcester, population 1,020, 6½ miles distant, reached by highway. General surface, part hilly. Acres tillable, 180. Large orchard on farm. Adapted to corn, oats, buckwheat and potatoes. Fences, wire, fair condition. House, large, in good condition. Outbuildings: barn, 60x32; another, 40x25, with basements in both, good condition. Two other barns in fair condition. Silo, 12x28. Occupied by tenant. Price, $4,000. Terms, one-half down, balance on mortgage. Address C. E. McRorie, owner, Westford, N. Y.

No. 488.— Farm of 150 acres; located 5 miles from Schenevus P. O. and railway station, on line of D. & H. R.

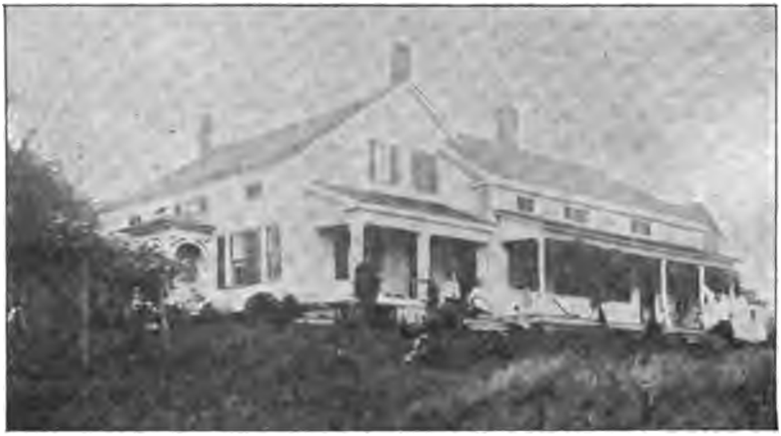


FIG. 55.— HOUSE ON FARM NO. 457, TOWN OF EDMESTON, OTSEGO COUNTY.

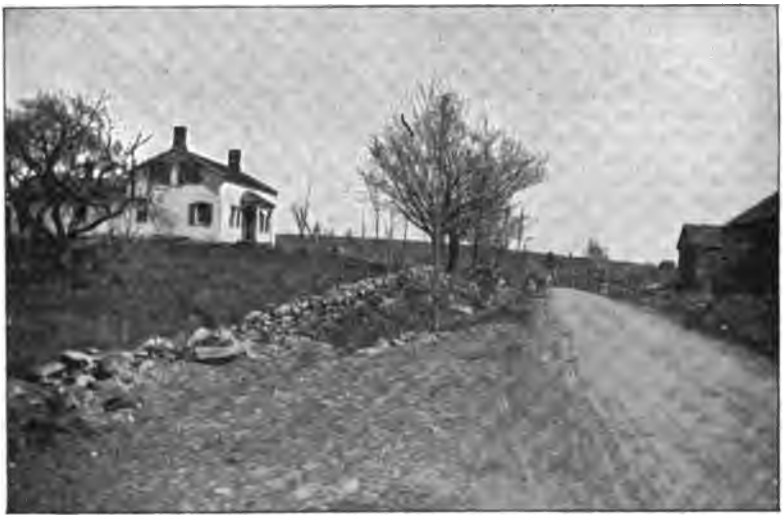


FIG. 56.— VIEW ON FARM NO. 507, TOWN OF GRAFTON, RENSSELAER COUNTY.

R.; R. D.; ½ mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, good. Surface of farm, rolling. Altitude, 1,550 feet. Soil, good. Acres that can be used as meadow, 100; in natural pasture, 10; in timber, 40, pine, oak, chestnut, beech and maple. Acres tillable, 100. Fruit, apples and pears. Best adapted to hay, grain and potatoes. Fences, mostly wire. Houses, one 20x32, wing, 14x24, good condition, painted white; tenant house, 20x32, fair condition. Outbuildings: 2 barns, poultry house, granary, milk house, basement barn, 30x54, with lean-to 16 feet wide, and barn 30x64. Running water in house and barn yard; fields watered by springs. Occupied by owners. Reason for selling, wish to retire. Price, $3,000. Terms, half cash, balance on mortgage. Address Leslie R. and Harry G. French, owners, Schenevus, N. Y.

No. 489.— Farm of 130 acres; located 1½ miles from Westford P. O.; 9 miles from railway station at Schenevus, on line of D. & H. R. R.; 1½ miles from school, cheese factory and churches. Nearest village, Worcester, population 1,020, 6½ miles distant, reached by highway. General surface of farm, hilly. Altitude 1,600 feet. Nature of soil, good. Acres that can be used as meadow, 60; in natural pasture, 50; in timber, 13, maple and beech. Acres tillable, 75 or more. Fruit, 20 apple trees or more. Adapted to potatoes, oats, corn and buckwheat. Fences, wire, fair condition. House, medium size, fair condition. Three good-sized barns, 1 storehouse, all in good condition. House watered by well, barns by running water, fields by brooks and springs. Reason for selling, unable to look after farm. Price, $1,800. Terms, $1,000 cash, balance on mortgage. Address Mrs. John R. Griggs, owner, Worcester, N. Y., R. D. No. 1.

TOWN OF WORCESTER

Population 2,416

No. 490.— Farm of 337 acres; 2 miles from Worcester on line of D. & H. R. R. House and barn old. First-class spring water, also creek. Part cleared, rest being cleared or will be within 2 years, as timber has been sold. Would make a good sheep farm. Price, $5,000. Address Silas W. Ferguson, owner, Worcester, N. Y.

No. 491.— Farm of 105 acres; 2 miles from Worcester P. O. and station, on D. & H. R. R. Good soil. Sixty acres pasture and meadow. No buildings. Spring water. Price, $1,500. Terms, easy. S. W. Ferguson, owner, Worcester, N. Y.

No. 492.— Farm of 132 acres; located 2½ miles from postoffice at Worcester; 2½ miles from railway station at Worcester, on line of D. & H. R. R.; 2½ miles from school and churches; 2½ miles from milk station. General surface of farm, rolling. Altitude, 2,200 feet. Nature of soil, clay loam. Acres that can be used as meadow, 70; in natural pasture, 40; balance in timber, mainly hardwoods; excellent sugar grove of 250 to 300 trees. Large number of apple and other fruit trees. Adapted to potatoes, hay and grains; also to raising cows, sheep and poultry. Stone and wire fences in good repair. House of 10 rooms, woodhouse attached, in excellent condition. Two large barns and hog house, in excellent condition. Watered by well, springs and brook. Reason for selling, old age. Price, $5,000 including farm tools. Terms, half cash, balance on long term mortgage. Farm will keep 15 or 20 cows and team; was occupied as dairy farm for past 50 years by present owner. Address Wellington D. Ives, 19 South Manning Blvd., Albany, N. Y.

PUTNAM COUNTY

Area, 241 square miles. Population, 12,767. Annual precipitation, 54.67 inches. Annual mean temperature, 50.8°. Number of farms, 973. County seat, Carmel.

This county is located in the southeastern part of the state bordering on Connecticut. It is bounded on the west by the Hudson River and is drained by the Croton River and Peekskill Creek.

The surface is hilly, and, while it is noted for its scenery, only a part of the soil is suitable for farming. The Matteawan and Peekskill Mountains extend into the western and central parts of the county, while the Taghkanic Mountains are located in the eastern part. Between these ranges is a valley three or four miles wide with black loam soil. This valley extends from the northern border about half way across the county, then broadens into a wide undulating plain containing black and gravelly loam. In the vicinity of Cold Spring and extending east and north is another valley having a clay loam soil. Among its features of interest are the highlands of the Hudson, and Lake Mahopac, a popular summer resort. Marble of excellent quality is extensively quarried and rich mines of iron ore are also found. The leading crops are corn, shelled, 30,189 bushels; oats, 32,077 bushels; rye, 4,250 bushels; potatoes, 49,725 bushels; hay and forage, 23,252 tons. Value of all farm property, $8,851,342, an increase of 14.6 per cent during the last decade. Domestic animals are as follows: dairy cows, 8,701; horses, 2,648; swine, 2,401; sheep, 5,901; poultry, 88,548; milk product, 5,080,275 gallons; receipts of dairy products, $583,016.

The county is traversed by the Harlem and Putnam divisions of the N. Y. C. & H. R. R. R., and the N. Y. N. H. & H. also passes through a portion of the county. There are 56 district schools. Drew Seminary and Female College is located at Carmel. Cold Spring has a large iron plant. Many poultry farms are located in this section. There are six agricultural organizations in the county, the purpose of which is to promote the farmers' interest.

TOWN OF PHILLIPSTOWN

Population 3,571

No. 493.— Farm of 129 acres; located 4 miles from Cold Spring P. O.; 4½ miles from railway station, on line of N. Y. C. R. R.; 1 mile from school and church and 40 rods from milk station. Highways, state road. Nearest city, Beacon, population 10,165, 8 miles distant, reached by rail and highway. General surface, rolling. Altitude, 300 feet. Nature of soil, clay loam. Acres used as meadow, 80; in natural pasture, 37; in timber, 12, chestnut, locust, etc. Acres tillable, 90. Fruit, 20 apple trees, cherries, etc. Adapted to corn, potatoes, rye and wheat. Fences, wire and stone wall, fair condition. House, 56x60, fair condition. Barn, 34x43, poor condition. Watered, house, by wells; barns, by wells; fields, by springs. Occupied by owner. Reason for selling, old age. Price, $7,000. Terms, ½ cash, balance on mortgage. Address George Wright and Sarah Wheeler, owners, Cold Spring, N. Y.

RENSSELAER COUNTY

Area, 650 square miles. Population, 121,330. Annual precipitation, 42.5 inches Annual mean temperature, 46°. Number of farms, 3,654. County seat, Troy.

This county is favorably located in the eastern part of the state bordered by Massachusetts on the east and the Hudson River on the west.

The surface is mostly hilly and partly mountainous, the Taconic mountains rising to the height of about 2,000 feet in the eastern part of the county. The Hoosic River Valley divides these into separate ranges.

The soil of this valley is clay and gravelly or slaty loam with hardpan subsoil. The range of hills near the center of the county is excellent for pasturage and dairying, the cultivation of potatoes also bringing good returns. The soil of this section is a conglomerate of sandstone and shale. Between these hills and the Hudson River the land is less rolling and general farming is profitably conducted. The reports on the products of the county are as follows: corn, shelled, 154,917 bushels; oats, 439,359 bushels; buckwheat, 58,102 bushels; rye, 177,403 bushels; potatoes, 468,022 bushels; hay and forage, 50,836 tons. The total value of all farm property is $18,216,934. This is an increase within the last ten years of 19.1 per cent. The average price of improved land in the county is $35.86 per acre. The buldings in this county are worth one million dollars more than the land. There are farms that can be bought for less than the value of the buildings. Domestic animals are reported as follows: dairy cows, 14,751; horses, 8,411; swine, 8,905; sheep, 10,565; poultry, 259,163; total production of milk, 10,001,020 gallons; the receipts from dairy products was $1,198,481.

The county is intersected by the N. Y. C. & H. R. R. R., Fitchburg and the branches of the D. & H. railroads which center at Troy. The Rensselaer Polytechnic Institute, Emma Willard Female Seminary and a Catholic Theological Seminary are located at Troy. The cities of Troy, Rensselaer and village of Hoosick Falls lie within the county, having a united population of about 100,000 people, and furnish a market for the farm products, while Albany and other nearby cities add to the great market facilities of the county. There are two important electric lines from Rensselaer to Hudson and from Troy to Averill Park in the center of the county. There are numerous lakes, ponds and streams of excellent water, affording abundant supply. There are 162 district schools, 75 miles of state and county roads, 1,202 miles of graded and improved highways, leaving only 11 miles of highway in the county not improved. The soil and climate are excellent for growing apples and other fruit. The farmers of the county have organized 12 different societies to further agricultural interests.

TOWN OF BERLIN

Population 1,480

No. 494.— Farm of 110 acres; 2 miles from Berlin P. O., R. D. and railway station on line of Rutland R. R.; 2 miles from school and churches, butter and cheese factory and condensing plant. Nearest city, North Adams, Mass., population 25,000, 13 miles distant, reached by rail and highway. General surface, rolling and hilly. Altitude, 1,000 feet. Nature of soil, slate loam. Acres in meadow, 20; in pasture, 80; in timber, 10, maple, beech, birch, and oak. Acres tillable, 75. Fruit, 75 apple, 12 cherry, 12 plum and 10 pear trees. Best adapted to oats, corn, potatoes and buckwheat. Fences, wire, fine condition. House, 1 story, 11 rooms, good condition. Outbuildings: barn, 32x42; wagon house, 20x26; poultry house, 14x22; hog house, all in good condition. House and barn watered by spring, fields by brook. Occupied by owner. Reason for selling, has another farm. Price, $1,600. Terms, cash. Address Henry R. Satterlee, owner, Berlin, N. Y.

No. 495.— Farm of 117 acres, located 1½ miles from Berlin P. O. and railway station on line of N. Y. C. R. R.; 1½ miles from school; 1½ miles from churches and condensing plant. Highways, good. General surface, hilly. Nature of soil, slate and clay loam. Acres in meadow, 40; in natural pasture, 50; in timber, 15, maple, sap bush of 400 trees, some oak. Acres tillable, 65. Fruit, 70 apple, 10 pear and 15 cherry trees, some grapes. Adapted to corn, oats, potatoes and hay. Fences, wire, fair condition. House, 9 rooms, fair condition. Outbuildings: barn No. 1, 36x40; basement barn, 24x30, silo, woodshed. House watered by well, barns by spring, fields by springs. Occupied by owner. Reason for selling, old age. Price, $1,700. Terms, on application. Address C. F. Collins, owner, Berlin, N. Y.

No. 496.— Farm of 92 acres, located ½ mile from South Berlin P. O. and railway station on line of Rutland Division of N. Y. C. R. R.; ½ mile from school and churches; 3 miles from condensing plant; 2½ miles from milk station. Highways, level and good. General surface, hilly. Altitude, 800 feet. Nature of soil, sandy loam. Acres in meadow, 35; in pasture, 25; in timber, 32, maple and beech. Acres tillable, 45 or more. Fruit, 70 apple, 4 pear, 20 plum and 3 cherry trees. Adapted to oats, buckwheat and strawberries. Fences, wire, good condition. House, 34x15, with wing 20x24, good condition. Large ell-shaped barn, wagon house and woodshed; tool and milk house; sap house with evaporator and 370 buckets, all in good condition. House watered by wells; barns, by running water; fields, by springs. Occupied by owner. Price, $3,000. Terms, $2,000 down, balance on mortgage at 5%. Address Frank R. Auerhahn, owner, South Berlin, N. Y., Box 13.

No. 497.— Farm of 800 acres; located 1½ miles from South Berlin P. O., and railway station, on line of Rutland R. R.; 1½ miles from school and church; 4½ miles from cheese factory; 1½ miles from milk station and 4½ miles from condensing plant. Highways, good. Nearest village, Berlin, population 1,500, 4½ miles distant, reached by rail or highway. Surface of farm, level, rolling and side hill. Altitude, 1,500 feet. Nature of soil, good loam. Acres that can be used as meadow, 200; in natural pasture, 100; in timber, 500, birch, maple, beech, oak and spruce. Acres tillable, 200. Fruit, 200 apple, 10 plum, 5 pear and 3 cherry trees. Adapted to all crops. Fences, 5 miles of new woven wire. Large 16-room house, in good condition. Outbuildings: barns, 30x40, 20x40, 30x40 and 24x30 — 16 barns in all, fair condition. House watered by spring, barns by spring and fields by spring and brook. Occupied by owner. Reason for selling, other business. Price, $25 per acre. Terms, one-third cash, balance in yearly payments at 6%. Address F. E. Wolcott, owner, South Berlin, N. Y.

No. 498.— Farm of 140 acres; located 1½ miles from Center Berlin P. O. and railway station on line of Rutland R. R.; 1½ miles from school, cheese factory and milk station; 2 miles from Protestant church; 3 miles from milk condensing plant. Nearest city, Pittsfield, Mass., 19 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,500 feet. Soil, slate loam. Acres in meadow, 50; in natural pasture, 40; in timber, 50, maple, beech and birch. Acres tillable 40. Fruit, apples, pears, plums and cherries. Best adapted to hay, corn, oats, buckwheat, potatoes and berries. Fences, wire, good condition. House, 43x30, 1½ stories, 8 rooms. carriage house, hen house, silo, wood Outbuildings, basement barn, shed and house, granary and sap house. Watered, house and barns by running water, fields by brook and springs. Occupied by owner. Reason for selling, owner in other business. This farm adjoins another one of 70 acres also for sale. For price and terms address M. H. Bentley, owner, Center Berlin, N. Y.

No. 499.— Farm of 70 acres; located 1¼ miles from Center Berlin P. O. and railway station on line of Rutland R. R.; 1¼ miles from school; 2 miles from churches; 1½ miles from cheese factory; 1¼ miles from milk station; 3 miles from condensing plant. Highways, good. Nearest city, Pittsfield, Mass., 19 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,500 feet. Soil, slate loam. Acres in meadow, 25; in natural pasture, 20; in timber, 25, maple and beech. Acres tillable, 40. Fruit, apples and cherries. Best adapted to hay, corn, oats, potatoes and buckwheat. Fences, wire, good. House, 22x30, new, 9 rooms. Outbuildings: barn 45 feet long with basement for stock and sap house, fair condition. Watered by springs. Occupied by tenant. This farm adjoins another one of 140 acres also for sale. For price and terms address Mrs. M. H. Bentley, owner, Center Berlin, N. Y.

TOWN OF EAST GREENBUSH

Population 1,559

No. 500.— Farm of 136 acres; located 2 miles from East Greenbush P. O. R. D. 2; 2 miles from railway station at Elliott's Crossing on line of Albany Southern Railway; ½ mile from school; 2 miles from churches. Highways, state and dirt roads. Nearest city, Albany, population, 107,979, 3½ miles distant, reached by rail and highway. Surface of farm, rolling and level. Soil, mostly dark loam. Acres in meadow, 85; in natural pasture, 18; in timber, 8, oak, pine and hemlock; acres tillable, 120. Fruit: apples, pears, prunes, cherries and grapes. Adapted to grain, hay, potatoes, cabbage and corn. Fences, board and wire, in good condition. 12 room house, in good condition. 1 barn; hay shed; carriage house; wood shed and wash house combined, and poultry house. House is supplied with well and spring water; barn, driven well; fields, springs and creek. Occupied by owner. Reason for selling, owner has two farms and can only work one. Price, $6,000. Terms, cash preferred; if not, $3,000 cash and balance on mortgage. Address Jesse Morner, owner, Troy, N. Y., R. F. D. 4. Will rent to party with 20 or more head of stock.

No. 501.— Farm of 150 acres; located ½ mile from East Greenbush P. O., on line of Albany Southern R. R.; ½ mile from school, churches and milk station. Highways, dirt and state road. Nearest city, Albany, population 107,979, 5 miles distant, reached by highway and trolley. General surface, rolling. Altitude, 400 feet. Nature of soil, loam. Acres that can be used as meadow, about 60; in natural pasture, 28; in timber, 10, oak, pine, chestnut and hickory. Acres tillable, 140. Fruit, about 4,000 trees, mostly apples, 500 pears, plums and cherries. Adapted to hay and grain. Fences, woven wire, in good condition. House, 6 sleeping rooms, bath, dining room, living room, den and kitchen, also tenant house. Outbuildings: large barns, tool shed, carriage house, tool shop, ice house, poultry house, 20x75, brooder house, 100x16; and incubator cellar. Watered, house and barns by running water; fields by springs. Occupied by owner. Reason for selling, death in family. Price and terms on application. Address Mrs. James Monroe Ruso, owner, East Greenbush, N. Y.

No. 502.— Farm of 77 acres; located 2½ miles from East Greenbush P. O., R. D. No. 2; 2 miles from railway station at Elliott, on line of Albany

Southern R. R.; 1 mile from school, 2½ miles from churches and 1 mile from milk station. Highways, good. Nearest city, Albany, population 107,979, 6 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam, good condition of fertility. Acres that can be used as meadow, 22; in natural pasture, 20; in timber, 15, second growth of chestnut and hard wood. Acres tillable, 47. Fruit, 450 apple, about 100 pear, cherry and plum trees, 50 grape vines, 2,000 strawberry and 500 raspberry bushes. Adapted to fruit and general farm crops. Fences, fair. Ten-room house, good condition. Outbuildings: hay barn, stock barn, silo, shop, wagon house and shed; pig pen, new, 80x16, and poultry house. Watered, house, by cistern and well; barns, by well; fields, by springs. Occupied by owner. Reason for selling, other business. Price, $7,500. Terms, $3,500 cash, balance on mortgage. Address E. L. Blakesless, owner, East Greenbush, N. Y., R. D. 2.

No. 503.— Farm of 65 acres; located 3 miles from West Sandlake P. O., R. D. No. 1; 5 miles from Rensselaer, on line of B. & A. and N. Y. C. R. Rs.; 1 mile from school; 3 miles from churches and 5 miles from milk station. Highways, state road. Nearest city, Albany, population 107,979, 5 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, good. Acres that can be used as meadow, 5; in timber, all kinds. Acres tillable, 55. Fruit: pears, cherries, plums, peaches and apples. Adapted to hay, rye, oats, corn and garden produce. Fences, mostly wire, a few rail. House, 2 stories, 10 rooms, good condition. Barn, 46x34, 20-foot posts, new; new wagon house. Watered, house by well and cistern, barns by never failing well; fields by springs. Occupied by owner. Reason for selling, other farms. Price, $4,500. Terms, cash or small mortgage. Address Elmer J. Hogle, owner, West Sandlake, N. Y.

No. 504.— Farm of 76 acres; located 2 miles from postoffice at East Greenbush (R. D. No. 2); 2 miles from trolley station on line of Albany Southern Ry.; 2 miles from churches. Nature of highways, good. Nearest city, Albany, population 107,979, distant 5 miles, reached by rail and highway. Small part of farm rolling; balance quite level. Nature of soil, mostly a slate loam. All can be used as meadow except woodland and orchard, about 25 acres; acres in timber, 10, young chestnut, white and rock oak, pine. Acres tillable, 66. Fruit trees, 350 apple; 25 cherry; 12 plum; 26 pear; currant bushes; blackberry; 1,500 new strawberry; grapes. Adapted to hay, grain and truck gardening. House, 40x18, with back addition nearly as large, condition good. Barn in good condition; cow stable for 12 cows, 4 horses, cement floor, steel swinging stanchions; silo, 12x28; good sized pig house and wagon shed. House watered by well of soft water and cistern; barns by driven well, 13 gallons per minute; fields by springs. Occupied by owner. Reason for selling, owner cannot devote enough time to farm. Price, $6,000. Terms, $2,500; may remain on mortgage. A new hen house costing $1,000 erected recently; new roof put on house and chimneys repaired; storm windows; front porch enclosed; ice house filled. Address Frank Van A. Miller, East Greenbush, N. Y.

No. 505.— Farm of 90 acres; located ¼ mile from East Greenbush postoffice, R. D. No. 2; five minutes' walk from railway station at Elliots, on line of Albany Southern R. R.; ¼ mile from school and churches; 5 minutes walk from milk station. Highways, trunk line, level. Nearest city, Rensselaer, population 11,210, distant 2½ miles, reached by Albany Southern R. R. and trunk line. General surface of farm, nearly level. Altitude, 250 feet. Nature of soil, loam. Acres used as meadow, 30; in natural pasture, 13; in timber, 6, hardwood, pine. Acres tillable 80. Fruit trees, apple, pear, peach and plum. Adapted to grains and hay. Wire and rail fences. House, 40x40, in first class condition. Barn, 36x20; grain barn, 40x36; carriage house, 54x32; hog pens, 20x24; smoke house, 8x10; ice house; all in first class condition. House watered by well and cistern; barns by wells; fields by streams. Hudson river 2½ miles distant. Farm occupied by owner. Reason for selling, owner retiring from farming. Price, $25,000. Terms, ½ down, ½ mortgage. Will rent with option to buy. Address Spencer B. Pockman, owner, East Greenbush, N. Y.

No. 506.— Farm of 73 acres; located at East Greenbush postoffice and railway station, on line of Albany Southern

R. R.; 5 minutes' walk from school, churches and milk station. Highways, state roads. Nearest city, Albany, population 107,979, distant 6 miles, reached by rail and highway. General surface of farm, mostly level. Altitude, 250 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; in natural pasture, 5; number tillable, 68. Fruit, 25 apple trees. Best adapted to grain, potatoes and corn. No fences except pasture lot. Two houses, one of 12 rooms, other of 9 rooms. One large hay barn, carriage house, pig pen, hen house, wood shed and horse stable. House watered by well and cistern. Hudson river 4 miles distant. Farm now occupied by owners. Reason for selling, to settle an estate. Price, $16,000. Terms, half mortgage. Address Lucretia Finkle and Fannie Van Buren, East Greenbush, N. Y.

TOWN OF GRAFTON

Population 948

No. 507.— Farm of 32 acres; located 11 miles from the city of Troy on lines of D. & H., N. Y. C. and B. & M. R. Rs.; ¼ mile from school and church. Highways, state road. Auto bus passes door. Surface, rolling. Altitude, 1,100 feet. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 2, hardwood, etc. Acres tillable, 15. Fruit: apples, pears, cherries, plums, grapes, strawberries and raspberries. Best adapted to potatoes, hay and grain. Fences, mostly wire, good condition. House, 10 rooms, in good condition. Barn, 25x35, good condition, hog house and 2 poultry houses. Watered, house by well, barns by well, and fields by spring and creek. Occupied by owner. Reason for selling, ill health. Price, $1,400. Terms, cash. Address A. B. Jones, owner, Cropseyville, N. Y.

No. 508.— Farm of 66 acres; located 3 miles from postoffice at Grafton Center (R. D. No. 1); 11 miles from railway station at Troy; ½ mile from school and churches; 7 miles from butter factory; 11 miles from milk station. Highways, state road. Nearest city, Troy, population 75,488; distant 11 miles reached by highway. General surface of farm, rolling. Altitude about 1,400 feet. Soil, good loam. Acres used as meadow, 20; in natural pasture, 40; in timber, about 5, oak. Acres tillable, 20. Fruit: apples, pears, plums, cherries, currants; enough for family use. Adapted to hay, oats, corn, potatoes. Stone and wire fences in good condition. House 18x40 feet, comfortable. Cow barn, 26x50; horse barn and wagon house; hen house, 50 feet; ice house; sap house. House watered by spring, barn by water piped from pond; fields by springs and pond. Town is 7 miles square and contains 20 or more small lakes. Occupied by owner. Reason for selling, owner living in city. Price, $3,000. Terms, cash preferred, but will take ½ down. Address Arthur M. Crandall, owner, 566 Second Ave., North Troy, N. Y., or R. D. 1, Cropseyville, N. Y.

No. 509.— Farm of 35 acres; located 3½ miles from postoffice at Grafton Center, R. D. No. 1; 4½ miles from railway station at Petersburg on line of Rutland R. R.; ¾ mile from church; 4½ miles from cheese factory and condensing plant; 9 miles from milk station. Highways, mostly state road. Nearest village, Hoosick Falls, population 5,406, distant 9 miles, reached by highway. General surface of farm, fairly rolling. Acres that can be used as meadow, 22; in natural pasture, 10; in timber, 5, mostly hemlock, some hardwood. About 16 acres tillable. Fruit mostly wild. Best adapted to corn, potatoes and nearly all kinds of grain. Fences mostly wire. House about 26x30, in fair condition. Barn, 26x36. House and barn watered by springs. A number of small lakes near by. Farm now occupied by tenant. Reason for selling, farm too far from owner's residence. Price $500. Terms, ⅓ down. Will rent with option to buy. Address George H. Grobecker, owner, Petersburg, N. Y.

No. 510.— Farm of 76 acres; located 4 miles from railway station at Petersburg, on line of Rutland R. R.; 4 miles from school, cheese factory and condensing plant; 1½ miles from churches. Highways, part state road. Nearest village, 4 miles distant, reached by highway. General surface of farm, rough. Altitude, 1,600 feet. Acres that can be used as meadow, 20; in natural pasture, 26; in timber, 30, hemlock, spruce, hardwood. Acres tillable, 10. Plenty of fruit for farm use, mostly apples. Best adapted to potatoes, corn and oats. Good fences. House of 8 rooms, 26x25 ft. Barn, 55x25; wagon house; all buildings in fair condition. House, barn and fields watered by springs. Farm now occupied

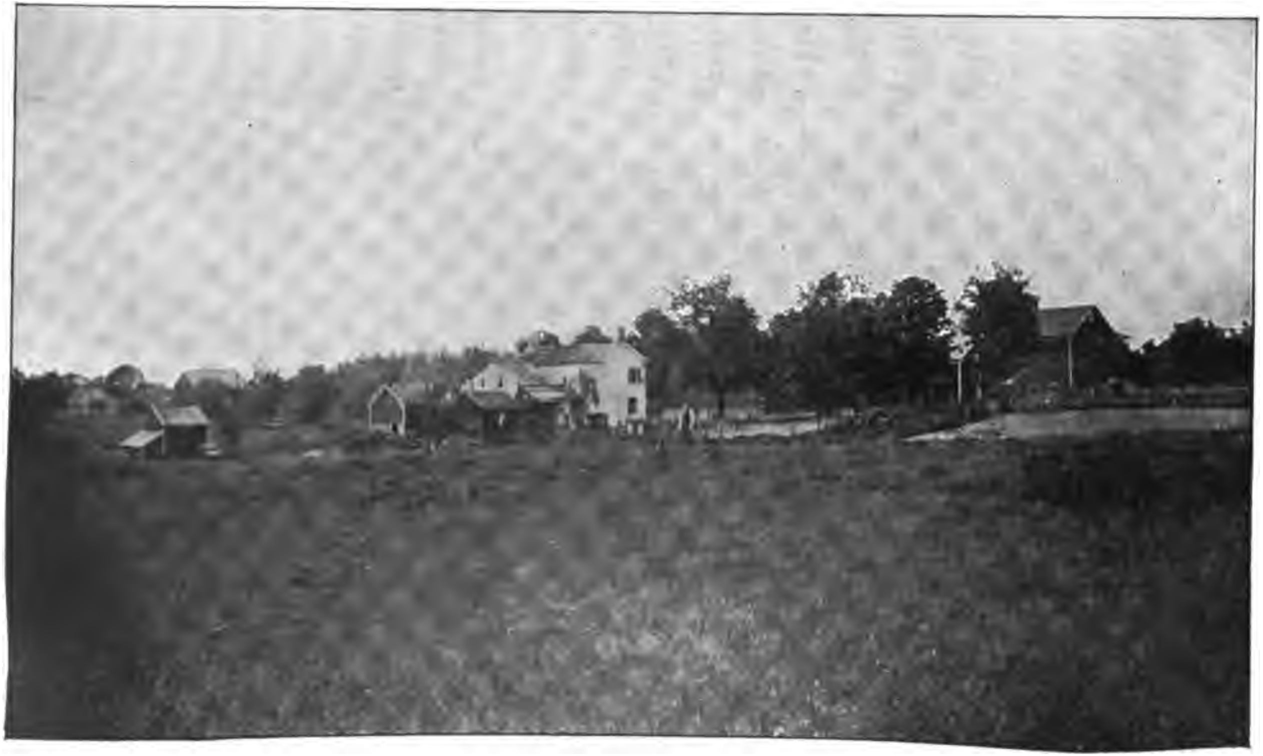


Fig. 57.— View on Farm No. 522, Town of Schodack, Rensselaer County.

by owner. Reason for selling, poor health. Price, $900. Terms, cash. Address Joseph Lock, owner, Petersburg, N. Y., R. F. D. 1.

TOWN OF NORTH GREENBUSH
Population 1,383

No. 511.— Farm of 90 acres; located 2 miles from postoffice at Rensselaer (R. D. No. 4); 2 miles from railway station at Rensselaer, on line of N. Y. C. R. R.; ¼ mile from school and church; 2 miles from milk station. Nature of highways, level state road. Nearest city, Albany, population 107,979, distant 2 miles, reached by rail and highway. General surface of farm, all level except 20-acre pasture lot. Nature of soil, heavy loam, clay mixed. Acres used as meadow, 70; in natural pasture, 20; tillable, 70. Fruit trees, 10 apple, 4 cherry, 4 pear. Adapted to rye, oats, hay, potatoes; fine garden land. Wire fences in poor condition. House of 13 rooms, in good condition. Barn, 30x40, in fair condition. House and barn watered by wells; fields, by springs. Hudson River 2 miles distant. Occupied by owner. Will rent for one year with privilege of 3 years. Address Elizabeth A. Van Lape, R. D. 4, Rensselaer, N. Y.

TOWN OF PITTSTOWN
Population 2,887

No. 512.— Farm of 112 acres; located 2 miles from Melrose P. O., R. D. No. 2 and railway station, on line of B. & M. R. R.; ½ mile from school; 2 miles from churches and milk station. Highways, good. Nearest city, Troy, population 75,488, 6 miles distant, reached by highway. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 20; in natural pasture, any part; in timber, 12, pine and hard wood. All tillable. Fruit, apples. Adapted to general crops. Fences, board and wire, fair condition. House, 100x45, new. Outbuildings: barns, 75x500, new; 80x40, 40x30, 70x60, 20x40 and 30x40, in good condition. Watered, house, by running water; barns, by same; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $7,000. Terms, $4,000 cash, balance on mortgage. Address Jacob A. Stover, owner, Melrose, N. Y.

No. 513.— Farm of 76 acres; located 5 miles from Johnsonville P. O., R. D. No. 1; 5 miles from railway station at Johnsonville, on line of B. & M. R. R.; ½ mile from school, 1 mile from churches and 5 miles from milk station. Highways, good. Nearest village, Valley Falls, population 795, 6 miles distant, reached by highway. Nearest city, Troy, population 75,488, 14 miles distant, reached by highway and rail. Altitude, 450 feet. General surface, level. Nature of soil, gravel. Acres that can be used as meadow, 45; in natural pasture, 12; in timber, 19, pine and hard wood. Acres tillable, 45. Fruit, 95 apple, 3 pear and 20 plum trees. Adapted to corn, potatoes, oats, rye and hay. Fences, wire and board, good condition. Ten-room house, fair condition. Outbuildings: new barn 38x50, with basement; new shed; silo, 13x27; poultry house; wagon house and wood shed. Watered, house, by spring and well; barns, by well; fields, by spring and brook. Occupied by owner. Reason for selling, other business. Price, $2,500. Terms, would like cash. Address Myron Van Namee, owner, Johnsonville, N. Y., R. D. 1.

No. 514.— Farm of 127 acres; located 4 miles from postoffice at Johnsonville (R. D. No. 1); 4 miles from railway station at Johnsonville or Valley Falls, on line of Boston & Maine R. R.; 1¼ miles from school; 1 mile from churches. Milk route goes by farm. Highways, level state road to Valley Falls; to other places, some hilly, but good. Nearest city, Troy, population 75,488, distant, 12 miles, reached by rail and state road most of the way. General surface of farm, about 40 acres level, balance hilly and level. Altitude, 350 feet. Nature of soil, gravelly loam; some clay sub-soil. Acres that can be used as meadow, 60; number now so used, 40; in natural pasture, 20 to 50; in timber, 12, mostly pine and oak. Acres tillable, 110. Enough apple trees for home use. Adapted to corn, potatoes, rye, oats, barley, hay and buckwheat. Fences, mostly woven wire, condition good. House, main part 32x45, two stories; new part 18x32, two stories, kitchen and woodshed attached; condition good. Hay and grain barn, 45x60x14 posts, with basement for cows and sheep; horse barn and wagon house, L-shaped, 60x24; sheep barn, 25x35; hog house, 30x30; 2 hen houses, 12x52. House watered by cistern and well; barns by running water; fields by brook and springs. Otter Creek flows through meadow. Occupied by owner. Reason for selling, poor health. Price, $6,600. Terms, cash preferred, but will consider part cash and balance mortgage. This farm was never rented and is one of the best in the section; outbuildings and house all in fine condition and all insured for $6,000, including contents. Address Irving M. Brownell, owner, Johnsonville, N. Y.

No. 515.— Farm of 213 acres; located 5 miles from postoffice at Johnsonville (R. D. No. 1); 5 miles from railway station at Johnsonville, on line of Boston & Maine R. R.; ¾ mile from school; 2½ miles from churches; 4 miles from butter and cheese factories. Highways, good dirt road, not hilly. Nearest village, Hoosick Falls, population 5,406, distant 8 miles, reached by highway. General surface of farm, rolling. Altitude, 700 feet. Soil, slate, stone subsoil. Acres that can be used as meadow, 175; acres now used as meadow, 125; in natural pasture, 25. Plenty of timber for farm use. Acres tillable, 175. About 30 apple trees. Adapted to potatoes, corn, oats, rye, and other crops. Wire fences in fair condition. Large 2-family house and tenant house in best of condition. Large barn, 30x45; horse barn and wagon house, 30x45; carriage house; granary; hog house. House watered by pump; barn by running water; plenty in fields. Now unoccupied. Reason for selling, ill health. Price, $4,000. Terms, $2,000 down and rest bond and mortgage. Will rent with option to buy, at $350 per year. This farm is 2½ miles from a good state road leading from Troy to Bennington and North Adams. Address J. E. Van Wert, 42 River Street, Hoosick Falls, N. Y.

TOWN OF SAND LAKE

Population 2,140

No. 516. Farm of 88 acres; located 2 miles from postoffice at Averill Park; 2 miles from railway station at Averill Park, on line of Troy & New England R. R.; ½ mile from school; 2 miles from churches. Nature of highways, best, level. Nearest city, Troy, population 75,488, distant 7 miles, reached by rail and highway. Nature of soil, loam. Acres used as meadow, 40; in natural pasture, 20; in timber, 10, mixed. Acres tillable, 40. Good variety of fruit. Adapted to almost any crops. Fences in fair condition. Ten-room house in good condition. Small barn and shed. House and barn watered by wells; fields by springs. Burden Lake ½ mile distant. Now occupied by owner. Reason for selling, old age. Price, $3,000. Terms, ½ cash. Address Adam Alberts, owner, West Sand Lake, N. Y.

No. 517.— Farm of 42 acres; located at West Sand Lake postoffice, near railway station, on line of Troy & New England R. R.; ⅛ mile from school and churches of all denominations. Good highways. Farm runs to village of West Sand Lake. General surface of farm, hilly. Nature of soil, gravelly loam. Acres used as meadow, 20; in timber, 5, pine and chestnut. Acres tillable, 20. Adapted to all kinds of crops. Fences in poor condition. No house, but large barn and shed. House and barn watered by well; fields by creek. Now unoccupied. Price, $1,600. Terms, $500 cash, balance, mortgage. Address Walter Clapper, owner, West Sand Lake, N. Y.

No. 518.— Farm of 50 acres; located ½ mile from postoffice and railway station at West Sand Lake, on line of Troy & New England R. R.; ½ mile from school and churches. Best highways. Nearest village, West Sand Lake, population about 1,000, distant ½ mile, reached by highway. General surface of farm, rolling. Nature of soil, gravelly loam. Acres used as meadow, 20; in natural pasture, 10. Tillable, all. Variety of fruit; good berry farm. Adapted to all crops. Fences in fair condition. House, 2-stories, 13 rooms, in first-class condition. Good set of barns, shed, etc. House and barns watered by wells; fields by spring. Occupied by owner. Reason for selling, death of husband. Price, $4,000. Terms, ½ cash. Address Mrs. Martha M. Eckes, West Sand Lake, N. Y.

No. 519.— Farm of 96 acres; located 1 mile from postoffice and railway station at West Sand Lake, on line of Troy & New England R. R.; 1 mile from school and churches. Highways, good, level. Nearest village, West Sand Lake, population about 1,000, about 1 mile distant, reached by highway. General surface of farm, fairly level. Acres used as meadow, 40; in natural pasture, 20. Tillable, 60. Not much fruit. Adapted to any kind of crops. Poor fences. Large house, needs repairs. No barn. House watered by well; fields by springs. Burden Lake, 1 mile distant. Occupied by owner. Reason for selling, owner not a farmer. Price, $1,800. Terms, ½ cash. Address Thomas Warren, owner, West Sand Lake, N. Y.

TOWN OF SCHAGHTICOKE

Population 2,711

No. 520.— Farm of 144 acres; located 2 miles from postoffice at Schaghticoke, R. D. No. 3; 2 miles from railway station at Schaghticoke or Melrose on line of B. & M. R. R.; ¾ mile from school and church; 2 miles from milk station. Highways, fine state road. Nearest city, Troy, population 75,488, distant 11 miles, reached by state road, B. & M. R. R. and auto bus. General surface of farm, rolling. Altitude, 300 feet. Nature of soil. loam and stony loam. Acres that can be used as meadow, 90; acres now used as meadow, 50; in timber, 7, mostly oak. Acres tillable, 135. Fruit, 6 acres apples; also peaches, cherries and pears. Best adapted to grain, potatoes, and celery. Good fences, mostly woven wire. House of 13 rooms, in good repair. Main barn, 36x90; basement for 20 cows; concrete floor and mangers; 4 other sheds and buildings in fair repair. House watered by drilled well; barn by drilled well, windmill; fields by springs and brooks. Hudson River 3 miles distant; Hoosick River, 2 miles; Tomhannock Creek, 1 mile. Occupied by tenant. Reason for selling, to close estate. Price, $7,000. Terms, ½ cash, remainder bond and mortgage. Address J. W. Button, executor, Schaghticoke, N. Y.

No. 521.— Farm of 114 acres; located 2 miles from postoffice at Schaghticoke, R. D. No. 2; 2 miles from railway station at Schaghticook on line of Boston & Maine R. R.; 1 mile from school; 2 miles from churches and milk station. Good highways. Nearest city, Mechanicville, population 8,208, distant 6 miles, reached bv rail and highway. General surface of farm, level, except wood and pasture. Nature of soil, sandy loam of good quality. Acres in natural pasture, 20; in timber, 24, all kinds. Number tillable. 70. Ten apple trees. Adapted to rye, corn, melons and berries. Poor fences. Seven-room, 1½-story house. 27x30 ft., with ell. Barn, 30x42 ft.; 2 40-ft. sheds. House and barn in fair condition, sheds need repairs. House watered by well and cistern; nelds bv brook. Hoosic River ½ mile distant; Hudson River, 3 miles. Occupied by owner. Reason for selling, poor health. Price, $2,500. Terms, cash. This is a pleasant place. No stone. Most of produce can be sold at door; main road. Owner has kept 8 head and could keep more. Address C. L. Franklin, owner, Schaghticoke, N. Y.

TOWN OF SCHODACK

Population, 4,647

No. 522.— Farm of 243 acres; located on line of B. & A. R. R.; 1½ miles from Van Hoesen Station, R. D. 1 from Castleton; 10 miles from Albany. Highways, good. Soil, deep, fertile, sandy and gravelly loam. Nearly all tillable; about 10 acres of timber. Fruit, 100 apple trees, also pears and grapes. Surface just rolling enough for natural drainage. Soil adapted to general farming, especially grain, potatoes and hay. Fences, wire, board and rail, good condition. There are two sets of buildings on this farm. The first designated as the Home Farm, has house, 22x24, 2 stories, with wing. Wood house, smoke house and other outbuildings, all in first-class condition. Outbuildings: barn, 40x60, recently built, 28 ft. posts; shed, 20x60, 18 ft. posts; wagon house, 25x60, 18 ft. posts, in first-class condition. No. 2 set of buildings has 1½ story house with complete set of outbuildings, all in good condition. Watered by never failing springs, brooks, 3 wells and 2 cisterns. Fine bed of moulding sand on farm. Reason for selling, owner a widow. For price and terms address Mrs. W. H. Van Vliet, owner, Malden Bridge, N. Y.

No. 523.— Farm of 137 acres; located 9 miles south of Albany P. O., R. D. No. 1; 2 miles from railway station at Brookview or Van Hoesen, on line of B. & A. R. R.; ⅓ mile from school; 4 miles from churches. Highways, good. Nearest city, Albany, population 107,979, 9 miles distant, reached by rail. General surface, 70 acres nearly level and about 30 acres of deep rich black muck, ideal for growing onions or other vegetables (70 acres in wheat and rye); sandy loam. Acres that can be used as meadow, all; in timber, 20, maple and white birch. Acres tillable, 90. Fruit, 100 apple trees, all varieties. Ideal soil for fruit trees. Fences, poor condition. No dwelling house. Barn 30x50, good condition; watered by well nearby. Reason for selling, other business. Price $4,000. Terms: ½ cash, balance on mortgage. The highway nearly divides the farm and the natural lay of the land must be seen to be appreciated, one of the features being 50 beautiful maple trees bordering highway near center of farm. Address Charles M. Winne, owner, Castleton, N. Y.

No. 524.— Farm of 143 acres; located 3 miles from postoffice at Castleton, R. D. No. 1; 1 mile from railway station at Brookview, on line of Boston & Albany R R.; 2 miles from school; 3 miles from churches; 1 mile from milk station. Good highways. Nearest city, Albany, population 107,979, distant 9 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil, sand loam and black soil. All of farm can be used as meadow; 40 acres now so used; acres in natural pasture, 75; in timber, 5, pine, chestnut, oak and hemlock. Acres tillable, 138. Fruit, 175 apple trees 26 years old and considerable small fruit. Best adapted to corn, oats, rye, grain. Wire fences in good condition. House, 24x50, in fair condition. Barn, 36x88; wagon house; hay barn, 36x40. House, barns and fields watered by springs. Hudson River, 3 miles distant. Farm now occupied by owner. Reason for selling, old age. Price, $8,000. Terms, ½ cash, balance can remain on mortgage. This is one of the best producing farms in this section. Address A. S. Bell, Castleton, N. Y., R. F. D. 1.

No. 525.— Farm of 47½ acres; located 4 miles from postoffice at Castleton, R. D. No. 2; 1½ miles from railway station at Van Hoesen, on line of B. & A. R. R.; 2 miles from churches. Good gravel highway. Nearest large village, Castleton, distant 4 miles, population 1,583. Albany 12 miles distant reached by rail and highway. General surface of farm, rolling. Nature of soil, clay and loam. Nearly all of farm can be used as meadow. Some oak, pine and hemlock. Nearly all tillable. About 100 apple, pear and plum trees Adapted to corn, potatoes, oats, rye and grain. Fair wire fences. House, 16x24, with wing, 8 rooms, condition fair. Barn, 24x60, in fair condition, with shed and wagon house. House and barn watered by well and cistern; fields by creek. Hudson River 3 miles distant. Farm now occupied by owner. Reason for selling, owner has another large farm. Price, $2,700. Will rent. This is a good producing farm. Address Alenzo D. Finkle, owner, Castleton, N. Y.

No: 526.— Farm of 100 acres; located 3 miles from postoffice at Castleton, R. D. No. 2; 3 miles from railway station at Castleton, on line of N. Y. C. R. R.; 2 miles from school; 3 miles from churches. Highways, gravel on clay. Nearest village, Castleton, population 1,583, distant 3 miles, reached by rail and highway. Albany, population 107,979, ten miles distant. General surface of farm, rolling and hilly. Nature of soil, clay loam and gravel. Acres now used as meadow, 40; in natural pasture, 18; in timber, 7, oak, pine and hemlock. Acres tillable, 80. Fruit, 100 apple trees and some small fruit. Adapted to all crops. Wire fences in fair condition. House of fair size in good condition. New barn in good condition. House and barn watered by wells and cisterns; fields by creek running through farm. Hudson River 3 miles distant. Farm now occupied by owner. Reason for selling, old age. Price, $4,000. Terms part cash, rest on mortgage. This is a good producing farm, and the orchard has been bearing 3 years. Address John Miller, Castleton, N. Y.

No. 527.— Farm of 87 acres; located 2½ miles from postoffice at Nassau, R. D. No. 1; ⅝ mile from railway station at Best's Crossing, on line of Albany Southern R. R.; 1 mile from school; 1½ miles from churches; 1 mile from milk station. Good highways. Nearest city, Albany, population 107,979, distant 12 miles, reached by rail and highway. General surface of farm, rolling; sloping generally south. Altitude, about 650 feet. Nature of soil, clay loam. Nearly all can be used as meadow. About 7 acres in timber, oak, hickory, maple, with some pine. Acres tillable, about 80. Fruit trees, apple, pear, plum, cherry; grapes, strawberries, raspberries. Adapted to fruit and dairying. Wire fences in not very good condition. Modernized house with hot water heat, electric lights, hardwood floors, stone fireplace, water in kitchen; 11 rooms. Wagon house and stables; hay barn with cow stables for 11 head; wagon house with stable, 5 stalls, hog house, hen house, ice house, tool shed, smoke house, corn crib, etc. House watered by well; spring near barns; fields watered by stream which forms boundary along one side of farm. Nassau Lake ¼ mile away. Occupied by owner. Reason for selling, other business. Price, $3,500. Terms, depending on party. Address J. L. Sturtevant, 106 Chestnut St., Albany, N. Y.

TOWN OF STEPHENTOWN

Population 1,287

No. 528.— Farm of 180 acres; located 2 miles from Stephentown P. O., and railway station on line of Rutland R. R.; 1½ miles from school and churches; 4 miles from cheese factory; 2 miles from milk station. Highways, state road. General surface, level and rolling. Acres in meadow, 70; in pasture, 60; in timber, 50, chestnut, pine, hemlock and hardwood, 200 sugar maples. Fruit, apples, variety, 75 trees. Best adapted to oats, corn and potatoes. Fences, stone wall and woven wire. House, 28x36, in good condition. Outbuildings: barns, 50x28; 48x48; 18x30; 24x34 and 16x24. House and barns watered by piped spring water, fields by brook. Occupied by owner. Reason for selling, advanced age. Price, $4,000. For stock and tools included, $5,000, which includes 12 cows, 2 horses, and grain and forage. Address E. P. Quinlan, owner, Stephentown Center, N. Y.

No. 529.— Farm of 6 acres; located ½ mile from postoffice at North Stephentown; ½ mile from railway station at North Stephentown, on line of Rutland R. R.; 1½ miles from school; 3 miles from churches and milk station. Nature of highways, hilly but good. Nearest city, Troy, population 75,488, distant 22 miles, reached by rail and highway. General surface of farm level and hilly. Soil, loam. Acres used as meadow, 2; in natural pasture 2. Tillable, 2. Fruit trees, 6 apple, 5 pear, 4 plum. Adapted to all kinds of crops. Wire fence in good condition. Twelve-room house in good condition; slate roof. Barn, 30x22, new, slate roof; hen house, also new, 40x15 feet; two smaller hen houses. House watered by pump in kitchen; barn by pump. Trout brook runs by place. Now unoccupied. Reason for selling, business in city. Price, $1,800. Easy terms. Address Adolph Dreher, owner, 140 Third Street, Troy, N. Y.

ROCKLAND COUNTY

Area, 200 square miles. Population, 46,903. Annual precipitation, 51.73 inches. Annual mean temperature, 48°. Number of farms, 1,133. County seat, New City.

This county is located in the southeastern part of the state, bordering on New Jersey. The Hudson river forms its boundary on the east and it is drained by the Ramapo and Hackensack Rivers.

The surface is mostly hilly or mountainous. In the western part are found the Ramapo Mountains, which are steep, rocky and barren. The southern part of the county, and the level valley of the Hackensack River lying back of the Highlands of the Hudson, contain a very fertile soil of sandy loam; in this locality, dairying, poultry raising and vegetable and small fruit growing are conducted with great profit. Extensive deposits of clay and sand are found along the shores of the Hudson and brick-making is a leading industry. The crops reported are as follows: corn, shelled, 27,024 bushels; oats, 18,064 bushels; rye, 6,353 bushels; potatoes, 42,448 bushels; hay and forage, 11,008 tons. The value of all farm property is $11,194,649, an increase of 98.9 per cent. in ten years. This increase of $58.70 per acre represents the largest per cent. of gain in farm property of any county in the state, except Westchester. The average value of improved land in the county is $185 per acre. Domestic animals on 958 farms are as follows: dairy cows, 2,194; horses, 2,523; swine, 2,364; sheep, 499; poultry, 131,754; production of milk, 1,140,804 gallons, which sold for $148,179. There are no milk stations or factories in the county, the milk being shipped direct to New York City, which is only 32 miles from the county seat. Much trap rock is quarried in this region, where it is crushed for use in road making or mixed with cement for concrete structures. There are 47 district schools in the county. The agricultural organizations consist of one grange, a county agricultural association and a county industrial association.

TOWN OF STONY POINT

Population 3,721

No. 630.— Farm of 65 acres; located 3 miles from postoffice at Stony Point; 3 miles from railway station at Stony Point on line of W. S. R. R.; ¾ mile from school; 1 mile from churches; 1 mile from milk station. Highways, state road. Nearest village, Haverstraw, population 5.418, distant 3 miles, reached by highway. General surface of farm, level. Altitude, 500 feet. Nature of soil, sandy. Acres used as meadow, 40;

in natural pasture, 10; in timber, 5, oak, hickory and chestnut. Number tillable, 40. Twenty-five apple trees. Best adapted to corn. Stone fences. House, 30x40, in good condition. Barn, 40x50. Barn watered by cistern; fields by brook. Hudson River 3½ miles distant. Occupied by owner Reason for selling, old age. Price, $6,000. Terms, cash. Address Joseph Conklin, owner, Stony Point, N. Y., R. F. D.

No. 531.— Farm of 50 acres; located 1 mile from postoffice at Stony Point; 1 mile from railway station at Stony Point, on line of W. S. R. R.; 1 mile from school, churches and milk station. Good highways. Nearest village, Haverstraw, population 5,418, distant 3½ miles, reached by rail and highway. General surface of farm, level. Altitude, 100 feet. Nature of soil, loamy. Acres that can be used as meadow, 35; number now so used, 15. Number tillable, 40. Twenty apple trees. Adapted to hay and corn. Brick house, 50x30, condition good. Two barns about 30x30. House watered by well; barns by cistern. Hudson River 1 mile distant. Farm occupied by owner. Reason for selling. other business. Price, $1,800. Terms, ½ cash and ½ mortgage. Address P. W. Nickerson, owner, Stony Point, N. Y.

No. 532.— Farm of 25 acres: located 1 mile from postoffice; 2 miles from railway station at West Haverstraw; ½ mile from school; 1 mile from churches; 2 miles from milk station. Good highways. Nearest village, Haverstraw, population 5,418, distant 2 miles, reached by rail and highway. General surface of farm level. Altitude, 100 feet. Nature of soil, loamy. Acres used as meadow, 20; in natural pasture, 5. Tillable, 25. Forty apple and peach trees. Adapted to oats and corn. Good fences. House, 30x40, in good condition. Barn, 36x40, in good condition. House watered by cistern; barn by well; fields by stream. Hudson River 2 miles distant. Occupied by owner. Price, $5,000. Terms, cash. Address Estate of W. T. Weiant, West Haverstraw, N. Y.

ST. LAWRENCE COUNTY

Area, 2,296 square miles. Population, 90,291. Annual precipitation, 34.85 inches. Annual mean temperature, 49.3°. Number of farms, 8,224. County seat, Canton.

This county is located in the northern part of the state bounded on the northwest by the St. Lawrence River which separates it from Canada. The land area in this county is the largest in the state. It is intersected by Indian, Grass, Oswegatchie, Raquette and St. Regis rivers.

The surface is mostly hilly except a strip about eighteen miles wide, which extends along the St. Lawrence River, the soil of which is rich clay loam. In the southeastern section are the foothills of the Adirondacks. In these valleys we find a dark slaty and gravelly loam. The hills extend in broad ridges, the soil of which is a fertile clay loam. About 700,000 acres in the county are covered with forests of pine, sugar maple, oak, birch, elm, beech and other trees. Among the minerals are granite, iron ore, lead, limestone and Potsdam sandstone. Among the crops produced in this county are: corn, shelled, 141,604 bushels; oats, 2,478,798 bushels; potatoes, 568,636 bushels; barley, 75,772 bushels; buckwheat, 28,392 bushels; hay and forage, 337,384 tons. The value of all farm property, tools and live stock is $49,975,175. This represents an increase of 39.6 per cent. in ten years. The average value of improved lands per acre is $36.39. The number of domestic animals are: dairy cows, 98,802; horses, 24,531; swine, 27,120; sheep, 10,360; poultry, 434,566. The county leads in the production of milk, hay and forage; the production of the former being 47,654,538 gallons, the value of which with the products of 158 milk stations and factories was $4,435,441. Lumber is one of the chief exports as is also maple sugar. The county is intersected by the Central Vermont, R. W. & O. and Grand Trunk railroads. At Canton is located St. Lawrence University A state normal school is located at Potsdam. Massena Springs is a well known watering place. The large towns and the numerous smaller villages, with many manufacturing towns in New England and New York City furnish unlimited markets for all the products. There are 375 district schools in the county, 69 miles of state and county roads, 3,149 miles of other improved highways. There are forty-six agricultural organizations in the county.

TOWN OF BRASHER

Population 2,270

No. 533.— Farm of 60 acres; located 3 miles from Brasher Falls P. O.; 4 miles from railway station at Winthrop, on line of Rutland R. R.; ¾ mile from school; 2¾ miles from churches; 3 miles from butter factory; 4 miles from cheese factory and milk station. Highways, fair, ordinary town road. Nearest village, Brasher Falls, population about 600, distant 4 miles, reached by highway. General surface of farm, rolling. Nature of soil, sandy loam. Adapted to general crops. Wire and rail fences in good condition. Medium-sized house and barns, in good condition. House and barns watered by wells; fields by creek. Occupied by owner. Address James Riley, owner, Brasher Falls, N. Y., R. F. D.

TOWN OF CANTON

Population 6,777

No. 534.— Farm of 140 acres; ¾ mile from Eddy P. O.; 4 trains on N. Y. C. stop daily within 40 rods of house. Highways, good; state road. Clay loam soil. Acres in meadow, 70; natural pasture, 50; timber, 20, maple and beech; acres tillable, 120. Fruit, apples, also currants and berries. Occupied by tenant. Fences, woven wire and rail, good condition. House, 19x30, good cellar, good condition. Large barn, 126 feet long, with stable underneath, concrete floor; granary, and new milk house with concrete floor, in good condition. Watered by well and brook. This farm will keep 30 cows and team of horses and have hay to sell. For price and terms, address C. T. Humphrey, owner, Canton, N. Y., R. F. D.

TOWN OF MADRID

Population 1,471

No. 535.— Farm of 150 acres; located about 1 mile from Madrid P. O., R. D. 2, 1 mile from railway station at Madrid Springs, on line of Rutland R. R.; 1 mile from school, churches, butter factory, milk station and cheese factory; Highways, good. Nearest city, Ogdensburg, population 14,338, 17 miles distant, reached by rail and highway. Surface of farm, level and slightly sloping. Altitude, about 300 feet. Soil, loam. Acres in timber, 32, 7 acres of which are fine maple-sugar bush, remainder, elm, pine, ash, cedar, spruce, oak, basswood, beech, and birch, first and second growth. Acres tillable, 124. Fruit, enough for home use. Adapted to dairying, hay, corn, barley, wheat, buckwheat, potatoes, etc. Fences, stone and rail, in good condition. House, 1½ stories, 11 rooms and large wood shed attached, good condition. Outbuildings: barn, 45½x100, built in 1898, shed attached, one old barn, granary, hog and poultry house, pump and separator house with new gasoline engine and pump jack attached to wind mill pump, and sugar house. Buildings painted in 1915. Watered, house, by well and cistern; barn, by well; fields, by springs. Occupied by tenant. Reason for selling, owner a teacher and cannot attend to farm. Price, $8,500. Terms, $3,500 cash, balance on mortgage at 5%. Address M. Hall, owner, Madrid, N. Y. Will rent with option to buy.

TOWN OF STOCKHOLM

Population 2,655

No. 536.— Farm of 60 acres; located 3 miles from Winthrop P. O.; 3 miles from railway station at Winthrop, on line of Rutland R. R.; 1 mile from school; 3 miles from churches, milk station and butter factory. Good highways. Nearest village, Winthrop, population about 500, distant 3 miles, reached by highway. General surface of farm, rolling. Nature of soil, sandy loam. Acres in timber, 5, hardwood. Adapted to general farming. Wire and rail fences in good condition. Fair-sized house, in good condition. Barn, fair. House and barns watered by wells; fields by river. St. Regis River borders farm. Occupied by owner. Reason for selling, owner wishes to retire. Address John Crowley, owner, Winthrop, N. Y.

SARATOGA COUNTY.

Area, 800 square miles. Population, 62,982. Annual precipitation, 35.41 inches. Annual mean temperature, 47°. Number of farms, 3,611. County seat, Ballston Spa.

This county is located in the eastern part of the state, bounded on the east by the Hudson River and on the south by the Mohawk River, and is crossed by the Sacandaga River in the northwestern portion. The northern part of the county is tillable in the Sacandaga Valley and along the Hudson River. Toward the center of the county, the surface becomes less rugged and is adapted to pasturage and dairying, the soil being a sandy and gravelly loam. To the southwest, most of the soil is slate and clay loam and to the southeast, clay loam predominates. In the latter section, there are quite a number of sand spots which are not fertile.

The surface is extensively covered with forests of ash, beech, elm, chestnut, hickory, oak and sugar maple. The county contains several lakes, Saratoga Lake being the largest. Some of the leading crops are: corn, shelled, 199,683 bushels; oats, 536,754 bushels; buckwheat, 58,296 bushels; rye, 90,058 bushels; potatoes, 259,364 bushels; hay and forage, 72,303 tons. The value of all farm property is $15,960,106. The average value of farm lands per acre is $15.47 and of improved land, $32.03; a slight gain over the values of 1900. The domestic animals number: dairy cows, 14,920; horses, 8,350; swine, 9,581; sheep, 5,960; poultry, 250,048; production of milk was 7,203,456 gallons which with its products sold for $726,945.

The county is traversed by the Champlain Canal, the Delaware and Hudson, Fitchburg and Mt. McGregor railroads and in the southeastern part of the county are electric lines from Saratoga to Schenectady, Albany, Troy, Mechanicville and Fort Edward. Most of the products of the county are demanded by the local markets of Saratoga Springs, Ballston Springs and other villages. Saratoga Springs is one of the most fashionable summer resorts in the world. Here are more than 20 mineral springs, some of which are of great celebrity and are of recognized medicinal value. These springs are now owned by the state, being one of the results accomplished in the movement for the conservation of the natural resources of the state. The county contains 195 district schools, 74 miles of state and county roads, 1,011 miles of improved highways; and 18 agricultural organizations are aiding the individual farmers throughout the county.

TOWN OF CORINTH

Population 2,661

No. 537.— Farm of 80 acres; 1 mile from Palmer P. O.; 3 miles from Corinth railway station, on line of D. & H. R. R.; ⅛ mile from school; 2 miles from churches. Saratoga Springs, population 13,792, 12 miles distant, reached by rail and highway. One mile from state road. Surface of farm, rolling and level. Soil, sandy loam and clay, also 3 or 4 acres of muck. Acres in meadow, 30; in natural pasture, 35; in alfalfa, 1; in timber, 15. pine, hemlock, hardwood; acres tillable, about 50. Fruit, 50 apple trees, cherries, strawberries and grapes. Sugar maple orchard of about 150 trees. Best adapted to potatoes, corn, gardening, etc. Fences, wire and rail, in fair condition. House, 2 stories, good condition, main part 22x32, kitchen and woodshed, 18x26. Outbuildings: barn, 30x40; barn, 28x30; barn, 28x32, good condition; 2 poultry houses, hog house, sugar house, well house, new silo and other outbuildings. Watered, house, by well and cistern; barns, by well and spring; fields, by running water; ¾ mile from Hudson river; 3 miles from Lake Boneta; 5 miles from several other lakes. Occupied by owner. The International Pulp and Paper Mills are located near farm, so there is good market. Reason for selling, poor health of owner. Price, $4,000. Terms, $2,000 cash, remainder on mortgage. Address Mrs. William B. Storey, owner, Corinth, N. Y., R. D. 1.

No. 538.— Farm of 180 acres; located 2½ miles from Corinth P. O., R. D. 1; 4 miles from Corinth railway station, on line of D. & H. R R.; 1 mile from school; ¼ mile from churches. Population of Corinth, 2,415, reached by state highway. Altitude, 200 feet. Nature of soil, sandy loam. Acres that can be used as meadow 50; in pasture, 90; in timber, 40, hemlock, beech, maple, basswood and chestnut. Acres tillable, 60. Fruit, 4 old orchards; 200 young trees in new orchard. Best adapted to dairying and general farming. Occupied by owner. Fences, mostly wire, in good condition, others not so good. House, new, stone and concrete, 2 stories, 49x60, wing 29x32. Outbuildings: stone horse barn, 38x60; stone cow barn, 45x68; stone sheep barn, 39x27, all new, in good condition, partly unfinished. House watered by drilled well, fields by streams. Occupied by owner. Reason for selling, death of son and daughter. who were most interested. Price, $16,000. Terms, cash, might take mortgage for part. Address M. L. Davis, owner, R. D. 1, Corinth, N. Y.

No. 539.— Farm of 110 acres; located 2½ miles from Corinth P. O., R. D. No. 1, and railway station, on line of D. & H. R. R.; ½ mile from school; 2½ miles

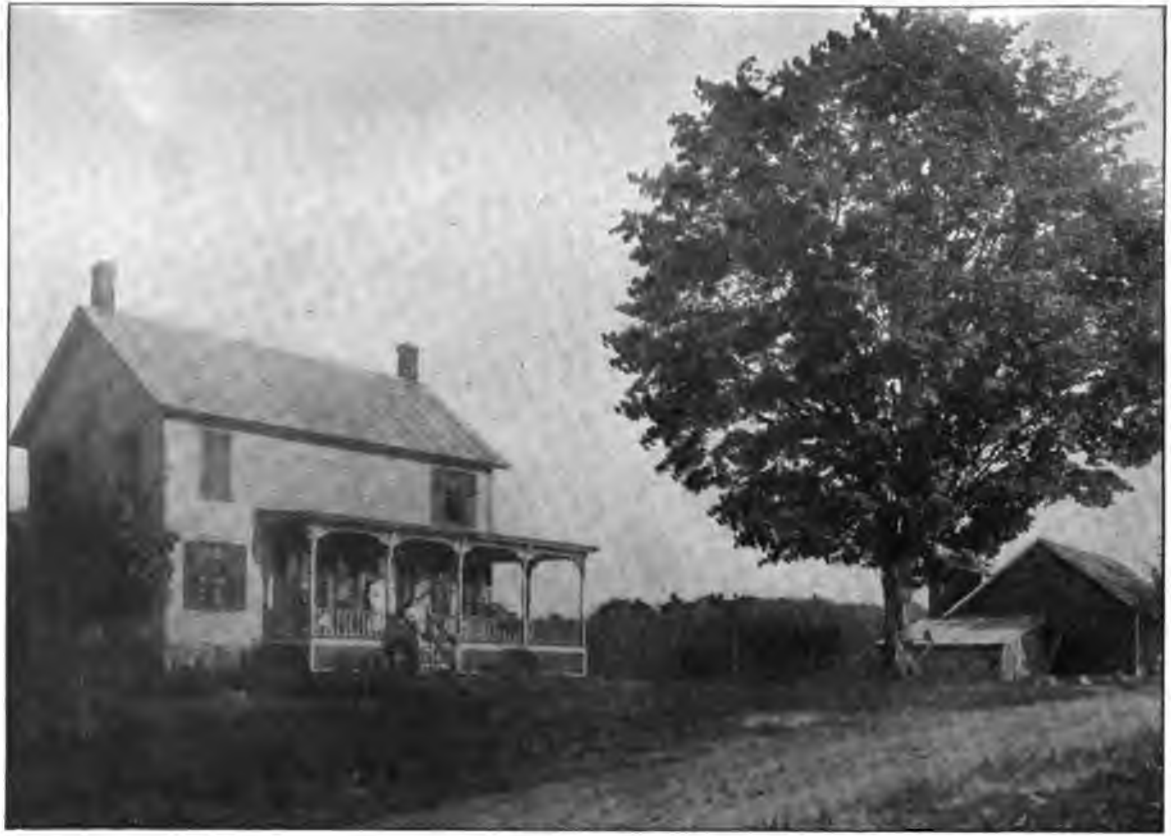


FIG. 58.—HOUSE ON FARM NO. 535, TOWN OF CORINTH, SARATOGA COUNTY.

from churches and 4 miles from butter factory. Highway, good. General surface, rolling. Altitude, 600 to 700 feet. Nature of soil, sandy loam, good quality. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 35, pine, hemlock and hard wood. Acres tillable, 75. Fruit, about 400 apple, 15 pear and 55 cherry trees, 1,000 raspberries, 400 blackberries and strawberries. Best adapted to corn and general farming. Fences, wire and stone wall, good condition. House, 7 rooms, metal roof, good condition. Outbuildings: barn 30x80 with addition, corn house, poultry house 12x35 and silo. House watered by well, barns, by well, fields by spring and brook. Hudson River, 2½ miles distant; foot hills of the Adirondack Mountains near and in plain view. Occupied by tenant. Reason for selling, other business. Price, $4,000. Terms, $2,000 cash, balance on mortgage. Address Harry S. Shorey, owner, Corinth, N. Y.

TOWN OF EDINBURG

Population 785

No. 540.— Farm of 80 or more acres; located ¼ mile from Edinburg P. O.; 4 miles from railway station at Northville, on line of Fonda, Johnstown and Gloversville R. R.; ¼ mile from school; 60 rods from churches. Highways, good. Nearest city, Gloversville, population 21,178, 18 miles distant, reached by rail or highway. General surface, level. Nature of soil, loam, good, Acres that can be used as meadow, 60; in meadow, 50; in natural pasture, 11; in timber, 25, beech, birch and maple. Acres tillable, 60. Fruit, all kinds of berries, cherries, currants, etc. Fences, woven wire, first class condition. House, 50x26, with wing, good condition. Outbuildings: 1 barn, 70x30, basement under all; corn house, 13½x15½; pig pen, 17½x15½; ice house, 13½x18½; poultry house, 36x14, new. Watered, house by 2 wells and cistern; barns, by running water; fields, by spring and tiling. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, cash. Price includes tools complete, 8 cows, 2 horses and 100 hens. Will take $3,000 for farm alone. Address H. F. Lawton, owner, Northville, N. Y.

TOWN OF GALWAY

Population 1,278

No. 541.— Farm of 177 acres; 11 miles from Amsterdam; 6 miles from railway station at Broadalbin, on line of F. J. & G. R.; ¼ mile from school and 1½ miles from churches. Twenty-five acres of tillable land, which would be enough to take care of the place; 81 acres in woods, 5 acres of which is a fine pine grove. The lake covers 65 acres, fed by trout streams, and there is fine fishing. The soil is a sandy loam. There is a new house of 17 rooms and the attic could be finished off for 2 or 3 more rooms; porch, 10x80. A 2-story camp in the pine grove; 2 cottages in pine grove, 12x20 each. Barn, 28x40; barn, 17x35; wagon house, 20x26; granary, 12x20; ice house, 12x12; hog house, 12x14; another building, 22x50, that could be made into a camp. Price, $5,000. Terms, ½ cash, balance on mortgage. Address A. A. Butterfield, owner, Hagaman, N. Y., R. D. 2.

No. 542.— Farm of 178 acres; located 2 miles from postoffice at Galway; 6 miles from railway station at Hagaman, on line of F. J. & G. R. R.; 1 mile from school; 2 miles from churches. Good highways. Nearest village, Galway, population 104, distant 2 miles, reached by highway. General surface of farm, good. Nature of soil, fair. Acres that can be used as meadow, 70; number now so used, 60; in natural pasture, 25; in timber, 40, hard and soft wood. Acres tillable, 100. Fruit trees, 56 apple, 12 cherry, 12 pear; good variety of berries. Well adapted to general farming. Stone and wire fences. House of 21 rooms, in good condition. Barn, 100x45 ft. wide; basement; wagon shed, 45x50; ice house, 12x12; hen house, 30x12; hog house, 12x12; corn house, 12x12. House and barns watered by wells; fields by springs. Reason for selling, old age. Price, $5,000. Terms, ½ cash, balance mortgage. Address Stephen Brown, West Galway, N. Y.

TOWN OF GREENFIELD

Population 1,642

No. 543.— Farm of 100 acres; 1½ miles from Middle Grove P. O., R. D. 2; 1½ miles from railway station on line of E. N. Y. R. R.; ¼ mile from school; 1½ miles from churches and milk station; 3½ miles from butter factory. Highways, somewhat hilly but good. Nearest city, Saratoga Springs, population 13,792, 8½ miles distant, reached by rail and highway. Surface, rolling and level.

Acres in meadow, 30; in natural pasture, 45; in timber, 25, pine, hemlock, chestnut and hard wood. Acres tillable, 75. Fruit, 20 apple, 4 plum and 4 cherry trees. Best adapted to corn, oats, buckwheat and vegetables. Fences, stone, rail, fair condition. House, 2 stories, 22x32; 2 wings, 13x18, hot and cold water. Outbuildings: barn, 26x47; cow stable, 13x24; wagon house, 18x24; tool house, 13x20; poultry house and hog house. Watered by well, spring and creek; water also pumped in house and barn by hydraulic ram. Lake Desolation, a summer resort, is about 2 miles from farm. Reason for selling, poor health of owner. Price, $3,000. Address Samuel Kilmer, owner, Greenfield Center, N. Y., R. D. 2.

No. 544.— Farm of 70 acres; located 2 miles from Greenfield Center P. O.; 2½ miles from Kings, on line of D. & H. R. R.; 3 rods from school; 2 miles from churches, milk station and condensing plant; 2½ miles from butter factory and cheese factory. Highways, state road. Nearest city, Saratoga Springs, population 13,792, 8½ miles distant, reached by rail and highway. General surface, mostly level. Altitude, 700 feet. Nature of soil, rich and sandy loam. Acres that can be used as meadow, 30; in natural pasture, 30; in timber, 20, pine, hemlock, ash, chestnut and oak. Acres tillable, 40. Fruit: 100 apple, 6 cherry, 2 plum, 2 pear trees and some grapes, raspberries and strawberries. Adapted to corn, oats, potatoes, alfalfa and clover. Fences, woven and barbed wire, in fine condition. House, 23½x51 of 12 rooms with summer kitchen 15x25. Outbuildings: carriage barn, 27x40; barn, 20x43; barn, 20x41; poultry houses, 10½x25½ and 7x9, all in good condition. Watered, house and barns by spring piped; fields by creeks and springs. Occupied by owner. Reason for selling, other business. Price, $3,500. Address William H. Stolting, owner, Greenfield Center, N. Y.

No. 545.— Farm of 98 acres; located 5 miles from Greenfield Center P. O.; 3 miles from Kings, on line of D. & H. R. R.; ¼ mile from school and 2½ miles from churches. Highways, good. Nearest city, Saratoga, population 13,792, 8 miles distant, reached by rail and highway. General surface, rolling. Altitude, 800 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 45 to 50; in natural pasture, about 25; in timber, 10, hemlock and pine. Acres tillable, 45. Fruit, about 40 apple, 8 pear, 7 plum, 1 peach, 6 cherry and 2 quince trees, also currants, grapes, strawberries and raspberries. Adapted to corn, potatoes, buckwheat, oats, rye and millet. Fences, wire, in good condition. House, 40x36, in good condition. Outbuildings: barn 30x25, in fair condition, large poultry house and hog house in good condition. Watered, house by well; barns and fields by stream. Occupied by owner. Reason for selling, wishes to retire. Price and terms on application. Address Mrs. T. E. Allwood, owner, Greenfield Center, N. Y., R. D. 2.

No. 546.— Farm of 100 acres; located 1½ miles from railway station at Kings on line of D. & H. R. R.; ¾ mile from school; 2 miles from churches and 1½ miles from butter factory. Highways, good country road. Nearest village, Corinth, population 2,415, distant 6 miles. Surface, gentle slope. Altitude, 600 feet. Nature of soil, sand and gravel loam. Acres in meadow, 25; in natural pasture, 25; in timber, 60, hemlock, pine, chestnut, and hardwood. Fruit, 100 young trees, plums, pears and apples. Adapted to potatoes, corn, fruit, truck gardening and general farming. Fences, partly new, wire, remainder in fair condition. House, 26x36 and wing. Outbuildings: cow barn, 30x40, carriage house and shed, 26x52. House watered by well, barns by spring, fields by spring and brook. Adirondack Mountains in the distance. Occupied by tenant. Reason for selling, owner has other business. Price, $2,000. Terms, cash $1,000, balance easy payment. Address Isaac Densmore, owner, Corinth, N. Y. Will rent at $200 per year.

No. 547.— Farm of 123 acres; located 1½ miles from Saratoga P. O., R. D.; ½ mile from railway station at Saratoga Springs; 1½ miles from school, churches and milk station. Nature of soil, sand, gravel and loam. Acres in meadow, 50; in pasture, 30; in timber, 25, pine, oak and hickory. Acres tillable, 50. Fruit, apples 35 trees, pears 5, plums 6. Best adapted to truck gardening. Fences, wire, good. House, 30x60, 15 rooms, good condition. Outbuildings: barn 30x52, shed attached, poultry house 30x20, ice house, shop over it,

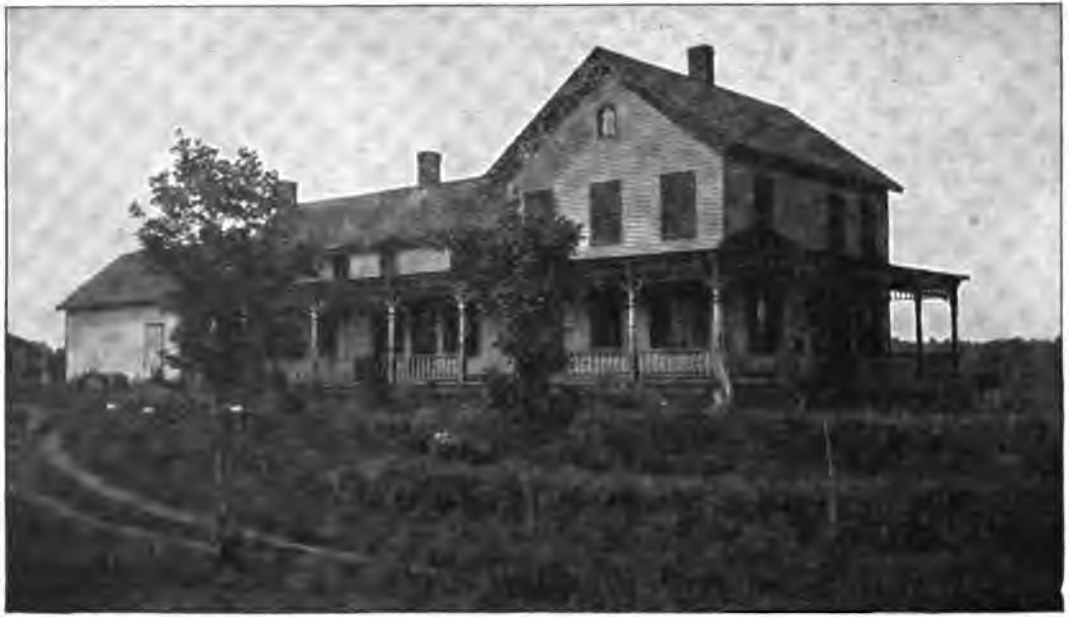


FIG. 59.— HOUSE ON FARM NO. 541, TOWN OF GALWAY, SARATOGA COUNTY.

15x25, open shed for wagons, 40 feet. House watered by reservoir, barns by driven well, fields by springs. Occupied by owner. Reason for selling, advanced age. Small pond on farm. Price, $5,000. Terms, $3,000, balance on mortgage. Address Charles P. Cronkhite, owner, Saratoga Springs, N. Y.

TOWN OF MALTA

Population 1,298

No. 548.— Farm of 54 acres; located 4 miles from Ballston Spa P. O., R. D. No. 3 and railway station, on line of D. & H. R. R.; 1/10 mile from school; ¼ mile from churches; 4 miles from butter factory and milk station. Nearest city, Saratoga Springs, population 13,792, 5 miles distant, reached by state road. General surface, rolling. Altitude, 300 feet. Nature of soil, part sand, part gravelly loam. Acres in meadow, 10; in pasture, 7; in timber, 3. Acres tillable, 34. Fruit, 25 apple trees, variety. Best adapted to gardening and grain. Fences, wire, good condition. House, 1½ stories, 13 rooms, 30x50. Outbuildings: barn, 30x40 with 13 ft. posts; carriage house, 20x40, poultry house, etc., all in good condition. Saratoga Lake, ¾ mile distant. Occupied by owner. Reason for selling, to settle an estate. Price, $3,000. Terms, cash. Address Charles N. Riley, owner, R. D. No. 3, Ballston Spa, N. Y.

No. 549.— Farm of 112 acres; located 3 miles from Ballston Spa, on line of D. & H. R. R.; ¼ mile from school; ⅛ mile from church and 3 miles from butter factory. Highways, good. Nearest city, Saratoga Springs, population 13,792, 4 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, sandy. Acres that can be used as meadow, 30; in natural pasture, 30; in timber 7, hemlock and hardwood. Acres tillable, 45. Fruit, apples, plums and cherries. Adapted to all kinds of farm products and garden truck. Fences, wire, in good condition. House, 12 rooms. Outbuildings: barn 32x55, wagon house, poultry house, ice house and corn house. Watered, house by well and cistern, barns by running water, and fields by creek. Unoccupied. Reason for selling, to settle an estate. Price, $4,200. Terms, cash. Address Bertha M. Cole, owner, Hyde Boulevard, Ballston Spa, N. Y.

TOWN OF MOREAU

Population 3,240

No. 550.— Farm of 50 acres; located ¾ mile from South Glens Falls P. O.; 1½ miles from railway station at Glens Falls on line of D. & H. R. R.; ½ mile from school; ½ mile from churches; 2 miles from butter factory and milk station. Highways, good. Nearest city, Glens Falls, population 16,323, 1 mile distant, reached by highway and trolley. General surface, nearly level. Nature of soil, sandy loam. Acres in natural pasture, 40. Acres tillable, 40. Fruit, 25 apple trees. Adapted to all kinds of crops. House, 12 rooms, brick, in good condition. Large barn, not very good. Watered, house, by city water; fields, by several springs. Occupied by tenant. Reason for selling, wishes to retire. Price, $16,000. Ninety rods of this farm borders on Hudson River. Address Miss Harriet A. Bentley, owner, 11 Pine street, Glens Falls, N. Y. Will rent.

No. 551.— Farm of 217 acres; located 3 miles from Gansevoort P. O., R. D. No. 1; 3 miles from railway station at Gansevoort, on line of D. & H R. R.; 1 mile from school and church; 3 miles from milk station. Good highways. Nearest village, Fort Edward, population 3,662, distant 4 miles, reached by highway. General surface of farm, rolling. Nature of soil, part loam, part clay. Acres used as meadow, 175; in natural pasture, 25; in timber, 17, suitable for cord wood, part hard. Acres tillable, 200. Fruit trees, 30 apple; cherries and pears for family use; also grapes. Adapted to hay, oats, corn and barley. Woven wire fences in good condition. House of 10 rooms, large piazza, good condition; tenant house, 7 rooms, condition not very good; new 7-room bungalow with garage, built last year. Dairy barns, 2 silos, 100-ton hay capacity; concrete barnyard, stable, floors, etc., all in good condition; milk house, carriage house, granary, tool shed, garage, hog house, ice house, etc. House watered by cisterns, air pressure system, piped to stables; barns by deep well; fields, access to large creek. Hudson River 1 mile distant; Lake George, 15 miles. Occupied by owner and tenant. Reason for selling, death of owner. Price, $13,000. Terms, ½ cash, balance in first mortgage. Will possibly rent with option to buy to right party. New state road being built 1 mile from farm, connecting with Gansevoort, Saratoga

Springs, Glens Falls and Lake George. Address Mrs. Anna M. Carey, Gansevoort, N. Y.

TOWN OF SARATOGA

Population 3,814

No. 552.— Farm of 167 acres; located ½ mile from railway station at Burgoyne, on line of B. & M. Ry.; ¼ mile from school; 6 miles from churches of all denominations and milk station; 2½ miles from butter factory; 7 miles from milk condensing plant. Highways, state road. Nearest city, Saratoga Springs, population 13,792, 6 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, clay, sand and gravel loam. Acres in meadow, 40; in natural pasture, 22; in timber, 9, pine and chestnut. Acres tillable, 100. Fruit, 45 apple, 6 cherry and 10 plum trees, also small strawberry patch. Best adapted to dairying or general farming. Fences, barbed wire and rail, fair condition. House, 2½ stories, 2 family, 18 rooms, good condition. Outbuildings: 2 barns, one 30x52, one 20x40, shed, carriage house, poultry house, ice house and smoke house, all in good condition except one barn and shed. Watered, house, by spring; barn, by drilled well; fields, by creek. Occupied by owner and tenant. Price, $9,000. Terms, ½ cash, balance on bond and mortgage. Fifteen acres of molding sand on farm. Address Chauncey A. Wooley, owner, Saratoga Springs, N. Y., R. D. 1. Will rent.

No. 553.— Farm of 60 acres; located 5 miles from Saratoga Springs P. O., R. D. No. 1; ½ mile from Cedar Bluff railway station on line of Boston and Maine R. R.; 2 miles from school; 5 miles from churches; ¼ mile from milk station. Nearest city, Saratoga, population 13,972, 5 miles distant, reached by rail or good gravel highway. General surface, gently sloping. Altitude, 420 feet. Nature of soil, clay and gravelly loam. Acres in meadow, 48; in timber, 8, ash, maple and elm. Acres tillable, 48. Fruit, 30 apple trees, varieties, also a number of young trees. Adapted to grain and hay. Fences, rail, barbed and cable wire, need some repairs. House, 12 rooms, in fair condition. Outbuildings: carriage and horse barn, 40x26; hog house, 20x30, 2 stories; poultry house, 12x24; carriage house needs repair. House and barns watered by piped spring; fields, by brooks. Saratoga Lake adjoins farm. Occupied by owner. Reason for selling, other business. Price, $3,500. Terms, cash. Address Wm. W. Munro, owner, R. D. 1, Saratoga Springs, N. Y.

No. 554.— Farm of 87 acres; located 4 miles from Wayville P. O., R. D. 1; 1 mile from railway station at Cedar Bluff on line of Boston & Maine R. R.; 1 mile from school; 3 miles from churches; 6 miles to butter factory; 1 mile from milk station. Nature of highways, good. Nearest city, Saratoga Springs, population 13,792, 6 miles distant, reached by highway. General surface, rolling. Altitude, 350 feet. Nature of soil, slate loam. Acres in meadow, 25; in pasture, 10. Acres tillable, 75. Fruit, 225 apple, 65 pear and 25 plum trees. Best adapted to potatoes and fruit. Fences, woven wire, good. House, 11 rooms, 25x31; wing, 15x18, good condition. Outbuildings: barn, 36x58, horse barns, 30x28 and 30x20, woodshed, 21x30, poultry house, 10x30. House and barns watered by wells; fields, by springs and brook. Saratoga Lake, 1 mile distant. Occupied by owner. Reason for selling, other business. Price, $6,000. Terms, cash. Address Fred Peck, owner, Wayville, N. Y., R. D. 1.

No. 555.— Farm of 114 acres; 7 miles from Saratoga Springs P. O., R. D. 1; 2 miles from railway station at Cedar Bluff on line of B. & M. R. R.; ½ mile from school; 2 miles from churches and milk station; 4 miles from butter factory. Highways, good. Surface of farm slopes a little south, well drained Soil, clay and sand loam. Acres in meadow, 60; in timber, 13, variety; acres tillable, 100. Fruit, 70 apple, 11 pear, 16 cherry trees and some grapes. Adapted to hay, grain, fruit, etc. Fences, wire, board and rail, good condition. House, 2 stories, brick, 8 large rooms and hall, 4 small rooms; telephone in house. Outbuildings: 2 large basement barns, wagon house, poultry house, new iron roof on one barn last year, others painted, fair condition. Watered by well, spring and brook. Saratoga Lake, 2 miles from farm; Hudson River, 4 miles, and Adirondack Mountains, 12 miles distant. Occupied by tenant. Reason for selling, to close an estate. Price, $6,500. Terms, $3,500 cash, remainder on first mortgage, if desired. Address John W. Peck, owner, Fairport, N. Y.

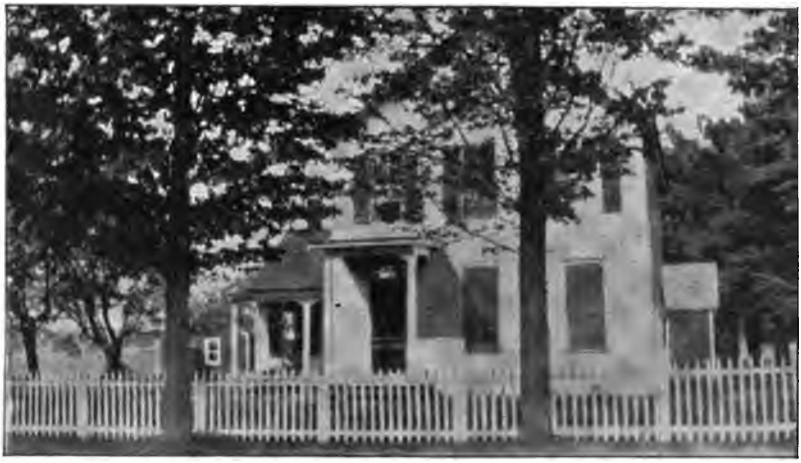


Fig. 60.— House on Farm No. 543, Town of Greenfield, Saratoga County.

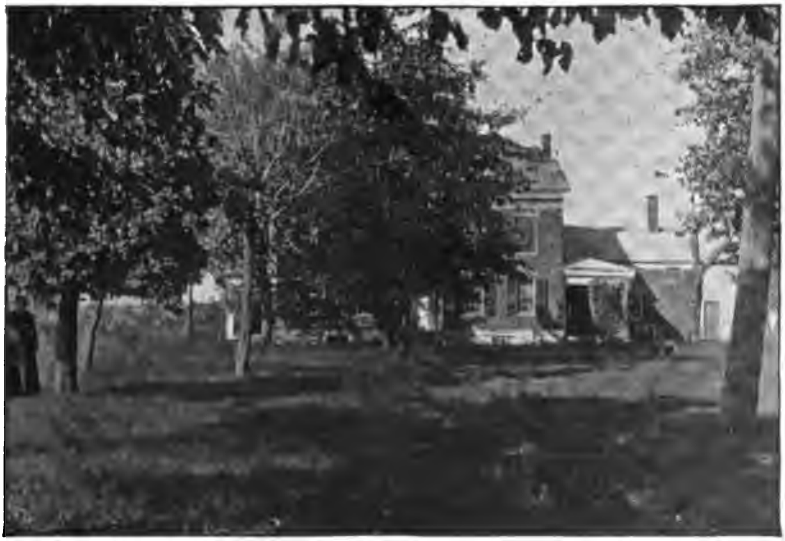


Fig. 61.— House on Farm No. 550, Town of Moreau, Saratoga County.

No. 556.— Farm of 120 acres; located 3 miles from Schuylerville P. O., R. D. No. 1; 8 or 10 rods from railway station at Gates, on line of B. & M. R. R.; 1¼ miles from school; 3 miles from churches and 1¼ miles from butter factory. Highways, mostly state road. Nearest city, Saratoga Springs, population 13,792, 9 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, about 500 feet. Nature and quality of soil, sand loam, clay and slate. Acres that can be used as meadow, 40 or more; in natural pasture, 15 or more; in timber, 10, chestnut, pine, oak, hickory, etc. Acres tillable, 100. Fruit, small apple orchard, strawberries, raspberries and rhubarb. Adapted to clover, all grains and vegetables. Fences, mostly wire. 12-room house and 3 clothes-rooms and halls, good condition. Outbuildings: main barn, 30x66; sheep shed, 21x46; poultry house, 13x30; cow stable, 20x30; horse stable, 17x24; hog house, tool house, ice house and wagon house which is connected with main barn and horse stable; also silo built two years ago. House piped from spring, barns from spring and fields by springs and brook. Hudson river, 3 miles distant. Occupied by owner. Reason for selling, old age. Price $6,000. Terms, $4,000 cash, balance on mortgage. Will sell stock and tools with farm. Address Orville Proper, owner, Schuylerville, N. Y.

No. 557.— Farm of 238 acres; 1 mile from Burgoyne, on line of B. & M. R. R.; 1 mile from school; 3 miles from church and butter factory; milk collected at door. Highways, state road. Nearest city, Saratoga Springs, population 13,792, 7½ miles distant, reached by rail and highway. General surface, rolling. Altitude, 500 feet. Nature of soil, gravel, sandy loam, black muck and clay. Acres that can be used as meadow, 213; acres now used as meadow, 69; in timber, 20, pine, chestnut and hard wood. Acres tillable, 213. Fruit, 60 apple, 4 pear, 4 cherry and 12 plum trees. Adapted to corn, potatoes, oats and hay. Fences, mostly American wire and some rail. House, 2 stories 40x28, with wing 20x18 and wood house 18x16. Outbuildings: hog house 65x25, horse stable 35x22, dairy barn 75x22, grain barn 58x30, shed 70x14, wagon house and hay barn 55x25. Watered, house, barn and fields by springs. Occupied by owner. Reason for selling, a smaller place desired. Price, $10,000. Terms, ½ cash and remainder on mortgage. Address William T. Smith, owner, Saratoga Springs, N. Y., R. D. 1.

No. 558.— Farm of 40 acres; ½ mile from Saratoga Springs; ¾ mile from railway station at Saratoga Springs on line of D. & H. and B. & M. R. Rs., ¾ mile from school and churches of all denominations. Highways, state road. Surface of farm, level. Soil, sandy loam. Acres in meadow, 2; acres tillable, 38. Best adapted to truck gardening. No fences. House, 10 rooms, steam heated, baths and toilets, excellent condition. Outbuildings: large barn, with basement, carriage house, green house plant, etc. Watered by city water. This place has been conducted as a hothouse and gardening plant for many years. There are 8 hothouses, averaging 100 feet in length, with a width of about 18 feet, double side benches with large center bench. Houses are heated with hot water boilers. In connection with these hothouses, are 2 large, well constructed boiler houses, with complete outfit and general storage space. Over one of the boiler houses is a 3-room apartment finished off which may be used for help. About 12 good-sized hot beds, with sash to cover. About 5 acres in asparagus beds; 20 acres in rhubarb used for forcing in hot-houses in winter. This business has been running for about 20 years and a market has been established in New York, Albany, Troy, Schenectady and locally which uses all of the products at a good price. Occupied by owner. Reason for selling, 'death of former owner. Price, $12,000. Terms, ½ cash, first mortgage on balance. Address Etta C. Wells, owner, 184 Church street, Saratoga Springs, N. Y.

TOWN OF STILLWATER

Population 6,837

No. 559.— Farm of 130 acres; located 4½ miles from Stillwater P. O., R. D. No. 1; 8 miles from Mechanicville, on line of B. & M. R. R.; 1¼ miles from school and 2¼ miles from churches. Milk and cream collected at the door. Highways, state road. Nearest village, Mechanicville, population 8,208, 8 miles distant, reached by rail and highway. General surface, level and rolling. Nature of soil, clay loam. Acres that can be used as meadow, 80; in timber, 18, hemlock, oak, pine and poplar. Acres tillable, 112. Fruit, apple orchard of 8 acres, some pears, grapes, plums and cherries. Adapted to hay, rye, oats and corn. Fences, wire, board and rail, in fair condition. House, 13 rooms, in excellent condition. Outbuildings: large basement barn, with stable for horses and cattle, wagon house, corn crib, ice house, poultry house and hog house, all in good condition. Watered, house by sulphur well and cistern; barns by well, and fields by well and running water. Occupied by owner. Reason for selling, ill health. Price, $7,500. Terms, ⅓ cash and remainder at 6%. Address S. A. Rogers, owner, Stillwater, N. Y.

No. 560.— Farm of 113 acres; located 1 mile from postoffice, railway station and milk station. Nearest city, Saratoga Springs, population 13,792, distant 6 miles. reached by highway. Excellent soil. Acres tillable, 80; balance in pasture and timber; chestnut about $1,500 worth. Excellent apple orchard of 140 trees; plenty of cherries, plums, pears, grapes, currants, etc., all in good bearing. Best adapted to potatoes. Mostly good fences. House old but comfortable. Good barn, 60x40; shed, 25x40; good stable, wagon house, hog house, etc. Part galvanized steel roofing; buildings good. House watered by well and spring brook; water in barns piped from spring. Saratoga Lake 1 mile distant; State Reservation, 6 miles. Reason for selling, owner unable to give personal attention. Price, $7,000. Terms, $4,000 cash, balance mortgage at 5% for 3 years, or interest and $300 on principal annually till paid. $5,500 without timber. Address F. H. Putnam, owner, 115 West 104th Street, New York City.

No. 561.— Farm of 120 acres; located 1 mile from Wayville P. O.; 2 miles from 2 railway stations; ½ mile from church; 1 mile from milk station. Excellent highways. Nearest city, Saratoga Springs, population 13,792, distant 7 miles, reached by highways. Soil, sandy loam and gravel. Acres tillable, about 80, balance in pasture and timber consisting of young white pine, chestnut, etc. Fruit, about 100 apple trees; also pears, plums, cherries, grapes, etc., sufficient for home use. Best adapted to alfalfa and all grains and vegetables of this latitude. Fences need repairs. House of 1¾ stories. Barn, 60x40; shed, 20x40, with cow stable, hog house, horse stable and wagon house, ice house, corn house, etc. Buildings need some repairs. House watered by well and spring; barns by well, fields by spring. Farm, 7 miles from State Reservation; 4 miles from Champlain Canal and Hudson River. Reason for selling, owner too far away to give proper attention. Price, $4,500. Terms ½ cash, balance mortgage at 5%. Will make reduction of 5% for all cash if sold before rented for next year. Will consider any reasonable offer. Farm will keep 20 head of stock if properly handled. Address F. H. Putnam, owner, 115 West 104th Street, New York City.

SCHENECTADY COUNTY

Area, 200 square miles. Population, 98,625. Annual precipitation, 35.41 inches. Annual mean temperature, 46.8°. Number of farms, 1,027. County seat, Schenectady.

This county is located in the eastern part of the state and is intersected by the Mohawk River.

The surface in the western part of the county is uneven and hilly, the hills being small and abrupt with many ravines. This section is suitable for pasturage chiefly. In the southern and western parts and along the Mohawk Valley the soil is black slate and clay loam which is fertile and very productive. The value of all farm property in 1910 was $7,217,178, which was an increase of 29.1 per cent. in ten years. The principal crops reported were: corn, shelled, 37,392 bushels; oats, 278,450 bushels; buckwheat, 68,537 bushels; rye, 37,125 bushels; potatoes, 31,548 bushels; hay and forage, 28,590 tons. The average price of improved farm lands including buildings is $55.48 per acre. The average value per acre of farm land only, is $31.10, an increase of nearly $10 per acre in the decade following 1900. Domestic animals are found to be: dairy cows, 5,063; horses, 3,253; swine, 4,646; sheep, 1,479; poultry, 91,010. The number of farms reporting dairy cows are 864, producing 2,459,571 gallons of milk, which sold for $233,271. There are no creameries or cheese factories in the county, as most of the milk is sold in Schenectady and the nearby villages. The county is crossed by the Erie Canal (barge),

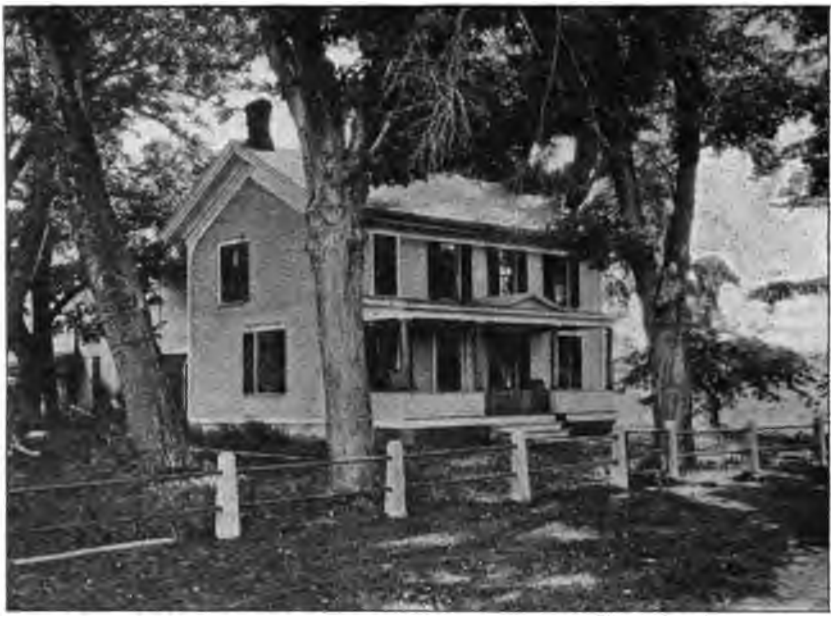


FIG. 62.— HOUSE ON FARM NO. 551, TOWN OF MOREAU, SARATOGA COUNTY.

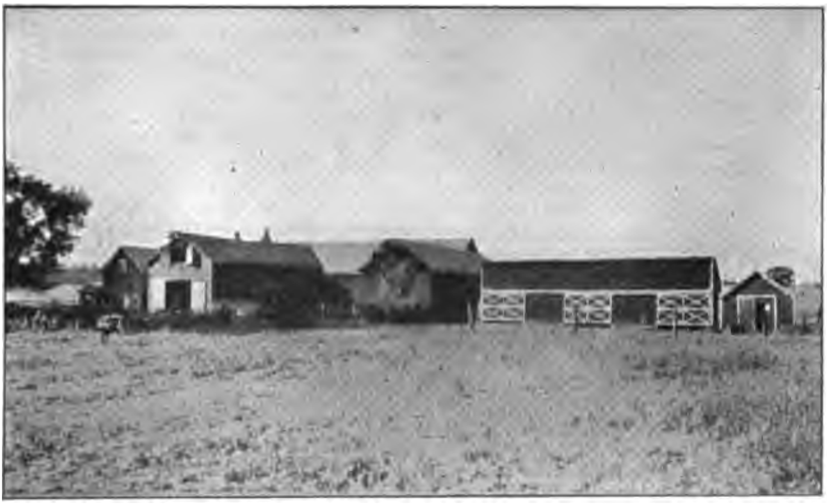


FIG. 63.— BUILDINGS ON FARM NO. 551, TOWN OF MOREAU, SARATOGA COUNTY.

N. Y. C. & H. R., West Shore and D. & H. Railroads and by numerous trolley lines leading to Amsterdam, Albany, Troy, etc. Schenectady, with a population of 80,381, is known largely as being the seat of Union University, founded in 1795. Here also is located the American Locomotive Works, the second largest plant of its kind in the country. The enormous plant of the General Electric Company, employing some 17,000 workmen, is also in that city. These two large industrial plants, in common with others scattered through the state, are largely responsible for the great numbers of farm boys that have quit the farm to work in these industries. There are 51 schools in the county and it has only 28 miles of highway not improved. Its agricultural organizations consist of an agricultural club, 3 granges, and poultry, pigeon and pet stock associations.

TOWN OF DUANESBURGH

Population 2,280

No. 562.— Farm of 88 acres; located 1¼ miles from postoffice at Delanson, R. D. No. 3; 1¼ miles from railway station at Delanson, on line of D. & H. R. R.; 1 mile from school and churches; 1¼ miles from butter factory and milk station. Good dirt and part state highways. Nearest city, Schenectady, population 80,381, distant 14 miles; reached by rail and state road. General surface of farm, mostly level. Nature of soil, loam, clay sub-soil. Acres that can be used as meadow, 80; number now used as meadow, 35; in natural pasture, 12; in timber, 8, hemlock, beech, maple, basswood. Acres tillable, 80. Fruit trees, 20 apple, 28 cherry, 30 plum, 10 pear; grapes and red raspberries. Adapted to hay, rye, corn, oats, buckwheat. Pastures fenced, stone and woven wire. House, 9 rooms, pantry and woodhouse. Barns, hay, cow, horse barn; 2 wagon houses; pig pen; 2 hen houses, granary. House watered by well and cistern; barns by well; fields by spring and well. Thompson's and Warner's Lakes 8 miles distant. Farm occupied by owner. Reason for selling, age and poor health. Price, $4.000. Terms, cash. Address George A. Glatt, owner, Delanson, N. Y.

SCHOHARIE COUNTY

Area, 647 square miles. Population, 23,005. Annual precipitation, 39 inches. Annual mean temperature, 48°. Number of farms, 3,288. County seat, Schoharie.

This county is located in the eastern part of the state and is crossed by the Schoharie Creek. It is also drained by the Charlotte River and the Catskill and Cobleskill creeks.

The surface is mostly hilly, the southern part being occupied by a range of highlands called the Helderbergs. This region is well timbered by oak, hickory, ash, sugar maple, elm and other trees. The soil in this section is a dark slate and gravelly loam. These hills decline and become less rugged toward the north and the dark slaty soil becomes more prevalent. In the northeastern part, clay loam is quite prominent. Between these hills lie the valleys of Schoharie, Cobleskill and Fox creeks, where the soil is a dark and yellow clay loam, deep and fertile. The county as a whole is adapted to pasturage, dairying and general farming. The county ranks second in hops and bees and fourth in the production of buckwheat. Some of the leading crops are: corn, 63,808 bushels; oats, 600,617 bushels; buckwheat, 143,998 bushels; rye, 33,287 bushels; potatoes, 126,745 bushels; hops, 2,156,883 pounds; hay and forage, 106,946 tons. The valuation of all farm property is $14,454,132, a gain of 16 per cent. in ten years. The average price of farm land per acre is $14.36. The price of improved land including buildings is $29.12. There are a large number of farms listed in this bulletin that can be bought for considerably less than the average of improved land. Domestic animals reported are: dairy cows, 22,063; horses, 6,928; swine, 7,311; sheep, 5,404; poultry, 227,959; production of milk, 13,748,588 gallons with a value of $1,418,629, including all dairy products. There are 30 milk stations and factories in the county.

The D. & H. railroad with a branch extending to Sharon Springs, a popular health resort, intersects the northern part of the county. The waters of this popular health resort are held in high repute for their medicinal value. A well equipped school of agriculture has been established at Cobleskill. The county has 1,202 miles of improved highways and 8 miles of state road. Excellent educational facilities are furnished by 179 district schools and the social and agricultural interests are conserved by 9 societies devoted to the interests of the farmer.

TOWN OF BROOME

Population 756

No. 563.— Farm of 180 acres; 9 miles from Middleburg P. O., R. D. 1, and railway station on line of M. & S. R. R.; ½ mile from school; 1 mile from church; 2 miles from butter factory. Highways, good. Surface of farm, mostly level and rolling, some hilly. Soil, good, gravelly loam. Acres in meadow, 50; in natural pasture, 100; in timber, 30, mostly hard wood; acres tillable, 75. Fruit, 200 apple, 25 plum, 3 pear trees, black and red raspberries and currants. Best adapted to dairying. Fences, stone and wire, good condition. Two houses, 24x30, good condition. Outbuildings: barn, 48x40; barn, 30x36; barn, 20x55; hog pen, 20x24; 2 poultry houses, 10x14 and 10x40; new silo, good condition. Watered by running water. Occupied by owner. Reason for selling, ill health. Price, $2,000. Terms, ½ cash, balance on mortgage at 5%. Will rent. Address Charles S. Lloyd, owner, Middleburg, N. Y., R. D. 1.

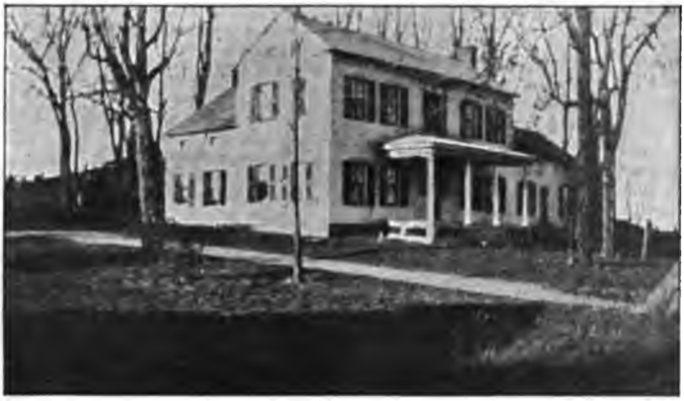
No. 564.— Farm of 160 acres; located 4 miles from postoffice at Berne and Rensselaerville, R. D. No. 2; 8 miles from railway station at Middleburgh, on line of Schoharie Valley R. R.; ¼ mile from school; 4 miles from churches; 2 miles from butter factory; 8 miles from milk station. Good highways. Nearest large city, Albany, population 107,979, distant 30 miles. General surface of farm, rolling, some level. Altitude, 1,800 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 90; number now so used, 25; in timber, 45, all kinds. Acres tillable, 115. Fruit trees, apple, pear, cherry, plum; all kinds of berries. Adapted to oats, rye, corn, barley, potatoes. Good fences. House, 14 rooms, good condition. Good barns. House watered by well; barns by brooks; fields by springs. Farm occupied by owner. Reason for selling, owner has two other farms. Price, $2,500. Terms, $1,000 cash. Address Mrs. N. Saddelmire, Middleburgh, N. Y., R. F. D. 2.

No. 565.— Farm of 100 acres; located 3 miles from Middleburgh postoffice; 3 miles from railway station at Middleburgh on line of Middleburgh and Schoharie R. R.; 30 rods from school; 3 miles from Methodist and Lutheran churches; 3 miles from milk station. Highways, somewhat hilly but good. Nearest village, Middleburgh, distant 3 miles, population 1,059, reached by highway. Surface of farm gently rolling but mostly level. Altitude about 1,350 feet. Soil, mostly good fertile loam, some clay. Acres that can be used as meadow, 12 to 15; now used as meadow, 10; in natural pasture, 10; in timber, about 15, mostly good quality hemlock; also some poplar and basswood. Acres tillable, 65 to 80. Apple orchard. Best adapted to corn, oats, buckwheat, potatoes, barley, beans and hay. Stone wall and wire fences, generally good. Two-story house, 41x24½ feet, woodshed attached. Barn, 30x38 feet; wagon shed, 25x30 feet; good sized hen house; milk house; all in good condition. House watered by well, pump inside; barns by spring; fields by brooks. Farm now occupied by owner. Reason for selling, owner is widow, not well, and too old to run farm. Price, $5,000. Terms, half cash, balance mortgage at 5% interest per annum. Address Mrs. Friederike Pape, Middleburgh, N. Y.

TOWN OF COBLESKILL

Population 3,870

No. 566.— Farm of 96 acres; located ½ mile from Howe Cave P. O., R. D. 1 and railway station, on line of D. & H. R. R.; 4 rods from school; ⅛ mile from churches; 1 mile from milk station. Highways, stone road, in good condition. Nearest village, Cobleskill, population 2,362, 5 miles distant, reached by highway and rail. Surface of farm, rolling. Altitude, about 900 feet. Soil, dark loam, bottom land, gravel and sandy loam. Acres in meadow, 40; in pasture, 20; in timber, 10, consisting of hemlock, beech and maple. Acres tillable, 70. Fruit, plums, cherries, pears, apples, also hickory nuts. Adapted to corn, oats, wheat, rye and potatoes. Fences, stone wall, in good condition and wire. House, 3 barns and poultry house, all connected; ice house, wood shed, silo, tenant house and hog pen. House and milk house are supplied with running water; barns, by spring water; fields, by springs. Premises are situated in vicinity of Helderberg Mountains and Cobleskill River bounds farm on south. Occupied by owner and tenant. Reason for selling, old age. Price, $8,000. Terms, ½ down, balance on mortgage. Will rent. Address Conrad Rickard, owner, Howe Cave, N. Y.



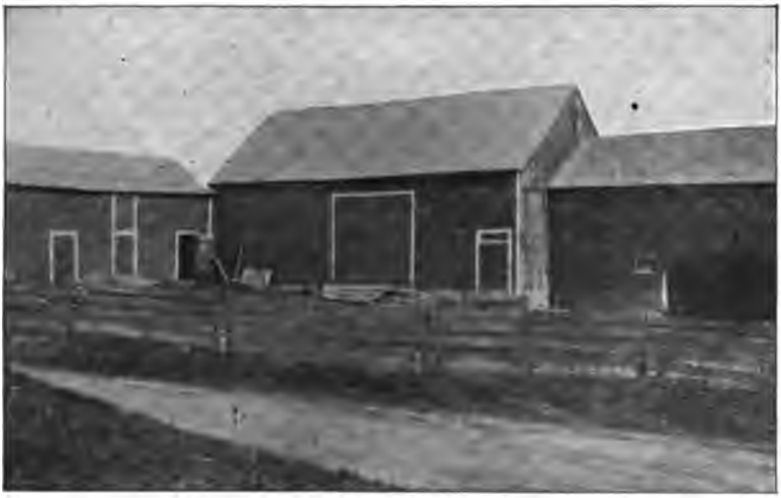


FIG. 64.— BUILDINGS ON FARM NO. 552, TOWN OF SARATOGA, SARATOGA COUNTY.

TOWN OF CONESVILLE

Population 681

No. 567.— Farm of 120 acres, 1 mile from West Conesville P. O., R. D.; 6 miles from Grand Gorge railway station, on line of U. & D. R. R.; ½ mile from school; 1 mile from churches; 3 miles from butter factory and milk station. Highways, somewhat hilly but good. Surface, rolling. Soil, clay loam. Acres in meadow, 50; natural pasture, 40; timber, 30, hardwood, some hemlock. Acres tillable, 30. Fruit, 4 pear, 10 plum, and 20 apple trees, also grapes, strawberries and currants. Best adapted to oats, barley, buckwheat and corn. Fences, wire, wall and rail, in good condition. House, upright, 30x20, with wing, 36x16. Outbuildings: barn, 50x30, with shed; pigsty, wagon house, 30x32, with horse stable and granary, all in good condition. Watered by well and springs. Occupied by owner. Price, $1,800. Terms, ½ cash, balance on bond and mortgage. Address David N. Patrie, owner, West Conesville, N. Y. Will rent.

TOWN OF FULTON

Population 1,350

No. 568.— Farm of 165 acres; 2½ miles from post office; 9 miles from Richmondville, on line of D. & H. R. R.; ¼ mile from school; ¾ mile from Methodist church and milk station. Highways, somewhat hilly. Nearest village, Richmondville, population 567, reached by highway. Surface, a little rolling. Soil, gravel and limestone. Acres in meadow, 70; natural pasture, 60; timber, 30, oak, maple and beech, 800-tree sugar bush. Acres tillable, 135. Fruit, about 35 apple trees. Best adapted to potatoes, buckwheat, barley and oats. Fences, stone wall, fair condition. House, 1½ stories, fair size, good condition. Outbuildings: quite a large barn, in fair condition; wagon house, pig pen. Watered by well and spring. Occupied by tenant. Reason for selling, other business. Price, $1,200 cash or $1,250 and take payment of $600 down. Address John E. Wharton, owner, Summit, N. Y.

No. 569.— Farm of 266 acres; located ½ mile from Fultonham P. O.; 4 miles from Middleburgh, on line of M. & S. R. R.; ½ mile from school and churches; 3 miles from butter factory and 4 miles from milk station. Highways, state road in construction. Nearest village, Middleburgh, population 1,509, 4 miles distant, reached by highway. General surface, rolling. Altitude, 300 feet. Nature of soil, rich loam. Acres that can be used as meadow, 125; in natural pasture, about 60; in timber, 75, oak, hemlock and pine. Acres tillable, 150. Fruit, 4 apple orchards, some cherries and pears. Adapted to corn, rye, wheat, oats and buckwheat. Fences, mostly wire, in fair condition. Two houses of 12 or more rooms, in good condition. Outbuildings: 2 large barns, wagon houses, silo, poultry houses and milk buildings, in good condition. Watered, house and barns, by running water; fields, by springs. Occupied by tenant. Reason for selling, to settle estate. Price, $18,000, ½ cash and remainder on mortgage. Address Mrs. Julia E. Haines, owner, 870 Lancaster street, Albany, N. Y. Owner will rent.

No. 570.— Farm of 114 acres; located 2 miles from postoffice at Patrie and West Fulton; 8 miles from railway stations at Middleburgh and Cobleskill, on line of D. & H. R. R.; 2 miles from school and churches; 2½ miles from butter factory and milk station. Nature of highways, hilly. Nearest villages, Cobleskill and Middleburgh, populations 2,362 and 1,059 respectively, distant 8 miles, reached by highway. General surface of farm, rolling and level. Good soil. Acres used as meadow, 70; in natural pasture, 30; in timber, 15, oak, maple, hemlock and ash. Eighty apple trees. Adapted to wheat, rye, potatoes, corn, oats and buckwheat. Barbed wire fences. House, 2 stories, 9 rooms. Barns, 42x30; 34x24; 26x15. House watered by nearby well; barns and fields by springs. Farm now occupied by owner. Reason for selling, old age. Price, $1,600. Terms, ½ cash. Will rent with option to buy. Address Frederich Scheelze, Patria, N. Y.

TOWN OF GILBOA

Population 1,420

No. 571.— Farm of 110 acres; 4½ miles from Stamford P. O. and railway station on line of U. & D. R. R.; ½ mile from school and church; 4½ miles from butter factory. Highways, fairly good. Nearest village, Stamford, population 1,060, reached by highway. Surface, rolling. Acres in meadow, 30; natural pasture, 50; timber, 30, hardwood, some hemlock. Acres tillable, 50. Fruit, about 30 apple trees, few cherry trees. Adapted to oats, potatoes, buckwheat and rye. Fences, mainly stone wall, in fair condition. House, 26x36, wood house attached, fair condition. Barn, 30x40, stable attached, fair condition. Watered by springs. This would make a good dairy farm. Occupied by tenant. Price, $1,600. Terms, part cash, balance on mortgage. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y.

TOWN OF JEFFERSON

Population 1,181

No. 572.— Farm of 220 acres, 1½ miles from Jefferson P. O.; 6 miles from Stamford, on line of U. & D. R. R.; ½ mile from school; 1½ miles from churches, butter factory and milk station. Highways, fairly good, near state road. Nearest village, Jefferson, population, 484. Surface, rolling and level. Soil, good loam. Acres in meadow, 50; natural pasture, 110; timber, 60, maple, beech and ash. Acres tillable, 100. Fruit, apples. Adapted to hay, oats, potatoes, buckwheat and rye. Fences, stone and wire, fair condition. House, large, 2 stories, built for summer boarders. Outbuildings: barn, 60x46, recently built, basement cow stable attached to barn. Watered, house, by well; barns and fields, by springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, $3,500. Terms, part cash, balance on time. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y. Will rent.

No. 573.— Farm of 240 acres; 1½ miles from Jefferson P. O.; 6 miles from railway station on U. & D. R. R.; ½ mile from school, churches, butter factory and milk station. Highways, state road. Nearest village, Stamford, population, 1,060, reached by highway. Surface, rolling and level. Soil, good, gravelly loam. Acres in meadow, 60; natural pasture, 130; timber, 50, spruce and hemlock. Acres tillable, 120. Fruit, about 30 apple and a few pear trees. Adapted to hay, oats, potatoes, buckwheat and rye. Fences, stone. House, 9 rooms, good condition. Outbuildings: barn and cow stable, 46x60; hog pen; granary and horse barn, 26x36, good condition. Watered, house, by well; barns and fields, by springs. The spruce and hemlock standing on this farm put into timber would half pay for farm. Occupied by tenant. Price, $3,500. Terms, small amount down, balance on mortgage. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y. Will rent.

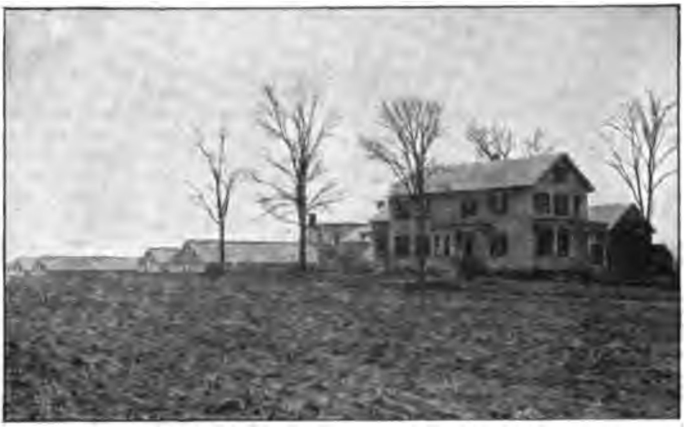
TOWN OF MIDDLEBURGH

Population 2,253

No. 574.— Farm of 160 acres; located 4 miles from Schoharie P. O. and railway station on line of M. & S. R. R.; 1½ miles from school, 2 miles from churches; 4 miles from butter and cheese factory. Highways, good, some hilly. Population of Schoharie 1,124, reached by highway. Surface, mostly level, some rolling. Acres in meadow, 69; in pasture, 40; 6 acres in hops; in timber, 30, hardwood and pine. Acres tillable, 120. Fruit, apples, pears, peaches, etc. Adapted to dairying, sheep raising, grain, hops, etc. Fences, barbed wire, fine condition. House, 2 stories, fine condition. Tenant house, fine condition. Outbuildings: large barn and sheds, hop house, engine house, fine condition. House and barns watered by pipe from springs. Occupied by owner. Reason for selling, wish to retire. Price, $4,000. Terms on application. Address Frank Stevens, owner, Schoharie, N. Y.

No. 575.— Farm of 150 acres; located 3 miles from Middleburgh P. O., and railway station, on line of M. & S. R. R.; ½ mile from school; 3 miles from churches and butter factory. Highways, good. Nature of soil, good. Acres that can be used as meadow, 50; in timber, 30, all kinds, hard and soft. Acres tillable, 120. Fruit, all kinds. Adapted to general crops. Fences, woven wire, board and stone, good. House, 16 rooms; 2 large halls, good condition. Outbuildings: 2 large barns, sheds, wagon house, poultry house, pig sty, milk house, all in good condition and painted. House watered by well, barns by well, and fields by springs. Occupied by owner. Reason for selling, ill health. Price, $5,600. Terms, $3,000 cash, balance on mortgage with annual payments of $200. Price includes all stock and tools. Address O. D. Borthwick, owner, Middleburgh, N. Y.

No. 576.— Farm of 340 acres; located 3 miles from postoffice at Middleburgh, R. D. No. 1; 3 miles from railway station at Middleburgh, on line of Middleburgh and Schoharie R. R.; 1 mile from school; 3 miles from churches and milk



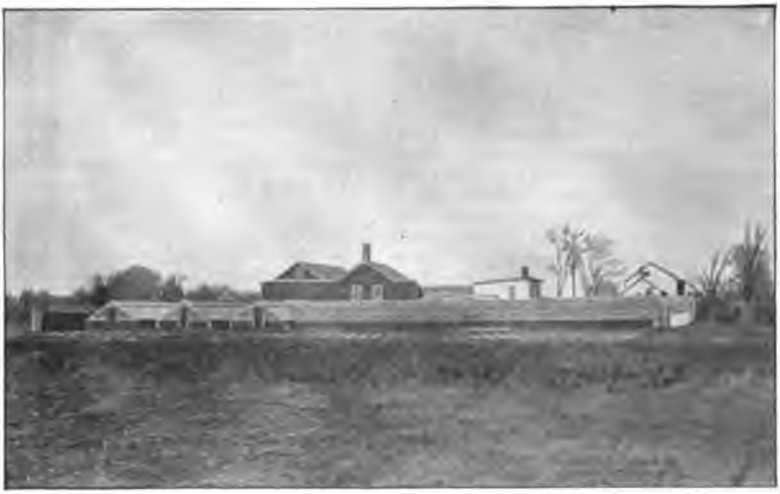


Fig. 65.— Views on Farm No. 558, Town of Saratoga, Saratoga County.

station; 4 miles from butter factory. Nature of highways, good, partly hilly. Nearest village, Middleburgh, population 1,059, distant 3 miles, reached by railroad. General surface of farm, rolling, level and part hilly. Acres that can be used as meadow, about 90; in natural pasture, about 40; in timber, 30; good hemlock, pine, and some hardwood. Acres tillable, about 200. Fruit trees, apple, pear, cherry, plum. Adapted to grain, potatoes, corn, beans. Stone walls and wire fences in fair conditions. House of 9 rooms in good condition. Barns and other buildings in good condition. House watered by pump from well; fields by brooks. Farm occupied by owner. Reason for selling, too much for owner to look after. Price, $7,200. Terms, $4,000 cash, balance on mortgage. Farm fully stocked with tools; 44 sheep; team; 17 cows; 1 bull; 4 two-year-old heifers, etc. Address Helen Batovic, owner, Middleburgh, N. Y.

TOWN OF RICHMONDVILLE

Population 1,460

No. 577.— Farm of 150 acres; located 2 miles from Richmondville postoffice; 2 miles from railway station at Richmondville, on line of D. & H. R. R.; 2 miles from school, churches and milk station. Highways, nearly all state road. Nearest village, Cobleskill, population 2,362, distant 3 miles, reached by rail and highway. General surface of farm, level and rolling. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, 20; in timber, 20, hard and soft wood. Acres tillable, 100. Apple orchard. Adapted to any crop. Wire fences in fair condition. Ten-room house in fair condition, upright part nearly new. Barn, 40x60; barn wing or cow barn, 25x32, needs some repairs. House watered by well; barns and fields by springs and stream. Farm at present unoccupied. Reasons for selling, old age and poor health. Price. $3,000. Terms, $500 down, up to full purchase price. Address D. B. Van Dusen, owner, Richmondville, N. Y.

TOWN OF SCHOHARIE

Population 2,438

No. 578.— Farm of 167 acres; located 3 miles from Schoharie P. O., on line of Schoharie Valley R. R.; 1¼ miles from school; 3 miles from churches and 3½ miles from milk station. Nature of highways, some level and some hilly. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, all; now used as meadow, 25; in natural pasture, 12; in timber, 35, white oak, black oak and pine. Acres tillable, 125. Fruit, apples, pears and plums for family use. Adapted to rye, oats, corn, potatoes, hay and beans. Fences, in fair condition. House, 9 rooms, in fair condition. Outbuildings: barn 45x50, wagon house 24x40, hop house 28x45, in fair condition, and dairy barn 20x36. Watered, house, by well; barns, by stream, and fields by springs. Occupied by tenant. Reason for selling, old age. Price, $3,700. Terms, agreeable. Address Martin D. Bailey, owner, Middleburg, N. Y.

No. 579.— Farm of 2¾ acres; located 2½ miles from Schoharie postoffice, R. D. No. 3; 2½ miles from railway station at Schoharie, on line of Schoharie Valley R. R.; ¾ mile from school; 2½ miles from churches and milk station. Good highways. Nearest village, Schoharie, population 1,124, distant 2½ miles, reached by highway. General surface of farm, level. Good soil. Acres tillable, 2¾. Fruit trees, 21 apple, 5 plum, 5 cherry. Adapted to potatoes and any other crops. Good fences. House of 6 rooms, good condition. Barn; and included in this sale would be 1 horse, 2 buggy wagons, 1 three-spring wagon, 2 sets harness; stove, furniture and tools of different kinds. House watered by well. Schoharie river 2½ miles distant. Farm occupied by owner. Reason for selling poor health of daughter. Price, $700. Terms, $400 cash, balance on mortgage with interest at 5%. Would make good home, and extra work from adjoining farmers can easily be had. Address B. Van Albert, Schoharie. N. Y.

TOWN OF SEWARD

Population 1,380

No. 580.— Farm of 116 acres; located ⅛ mile from Hyndsville P. O., R. D. No. 1, and railway station, on line of D. & H. R. R.; ⅛ mile from school, churches and milk station. Highways, good. Nearest village, Cobleskill, population, 2,362, 5 miles distant, reached by rail and highway. General surface, rolling. Altitude, 900 ft. Nature of soil, loam. Acres that can be used as meadow, 70; in natural pasture, 30; in timber, 16½, beech, maple and hemlock. Acres tillable, 100. Fruit, 15 apple trees. Adapted to oats, corn, buckwheat, potatoes and rye. Fences, wire, in good condition. House, 30x30x25, 7 rooms, in good condition. Outbuildings: wagon house, 50x30x15, main barn 60x60x30, ice house, milk house, shop, hog house, poultry house 15x45 and silo 18x32, all in good condition. Watered, house by cistern and well; barns by reservoir and well; fields by natural stream. Occupied by owner. Reason for selling, ill health. Price, $6,000. Terms, $3,600 cash and remainder on mortgage. Address William Zulch, owner, Hyndsville, N. Y.

TOWN OF SHARON

Population 1,781

No. 581.— Farm of 98 acres; located ½ mile from Sharon Springs P. O.; ¼ mile from railway station at Sharon Springs on line of D. & H. R. R.; ¼ mile from school; 1 block from Methodist church; ½ mile each to Episcopalian and Catholic churches; ¼ mile from butter factory and milk station. Highways, good. Surface of farm, level and slightly rolling. Altitude, 1,500 feet. Soil, black loam. Acres in meadow, 60; in natural pasture, 10; in timber, 10, consisting of maple and oak. Acres tillable, 88. Fruit, apples, pears, currants and berries. Adapted to hay, oats, buckwheat and rye. Houses were destroyed. Barn, fair condition. Watered: buildings supplied by village water; fields by streams, springs or village water. Price, $3,000. Terms, to suit purchaser. Sharon Springs is a noted summer resort and well patronized. Address Elizabeth S. Crannell, owner, 3 Hall place, Albany, N. Y. Will rent.

No. 582.— Farm of 20 acres; located at Sharon Springs, on line of D. & H. R. R.: ¼ mile from school and churches; 100 yards from butter factory, cheese factory and milk station. Highways, state road. General surface, level and rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, 15; in natural pasture, 5; acres tillable, 20. Fruit, apples, plums, pears and cherries. Adapted to all crops, garden truck and hops. Fences, board. Eight-room house, good condition, bungalow style. Large barn, good condition. Watered, house by village reservoir. Occupied by tenant. Reason for selling, other business. Price, $2,800. Terms, $1,500 cash, balance on mortgage at 5%. Address George J. Best, owner, Albany, N. Y. Will rent.

No. 583.— Farm of 100 acres; located at Sharon Springs, on line of D. & H. R. R.; ⅛ mile from school and churches. Highways, good. General surface, rolling and level. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, all; in natural pasture, 25; in timber, 11, not included in 100, beech, maple and pine. Acres tillable, 100. Fruit, a few pear, cherry and plum trees. Adapted to hay, oats, alfalfa and hops. Fences, wire, in good condition. House, 8 rooms. Outbuildings: large barn, milk house, ice house, poultry house and hog house. Watered, house by well; barns and fields by springs. Occupied by tenant. Reason for selling, other business. Price, $10,000. Terms, ½ cash and remainder on mortgage at 5%. Address George J. Best, owner, Albany, N. Y., care of Internal Revenue.

No. 584.— Farm of 100 acres; located 1½ miles from Sharon Springs station; ½ mile from Leesville flag station, on line of D. & H. R. R.; ½ mile from school and churches; 1½ miles from butter factory and milk station; 1 mile from cheese factory. Highways, good. Nearest village, Sharon Springs, population 531, 2 miles distant, reached by rail and highway. General surface, approximately level. Altitude, 1,400 feet. Nature of soil, rich lime rock. Acres that can be used as meadow, about 35; in timber, about 12, beech and maple. Acres tillable, 88. Fruit, 100 apple, 75 plum, cherry trees and a few grapevines. Fences, wire, in good condition. House, 12 rooms. Outbuildings: large barn and silo. Watered, house, by well and cistern; barns, by running water. Occupied by tenant. Reason for selling, ill health. Price, $5,000. Address C. W. Bronson, owner, Cherry Valley, N. Y.

TOWN OF WRIGHT

Population 926

No. 585.— Farm of 120 acres; located 3 miles from postoffice (R. D. No. 1) and railroad station at Schoharie, on line of M. & S. R. R.; ½ mile from school; 1¼ miles from churches and butter factory; 3 miles from cheese factory and milk station. State roads and no hills. Nearest village Schoharie, population 1,124, distant 3 miles, reached by

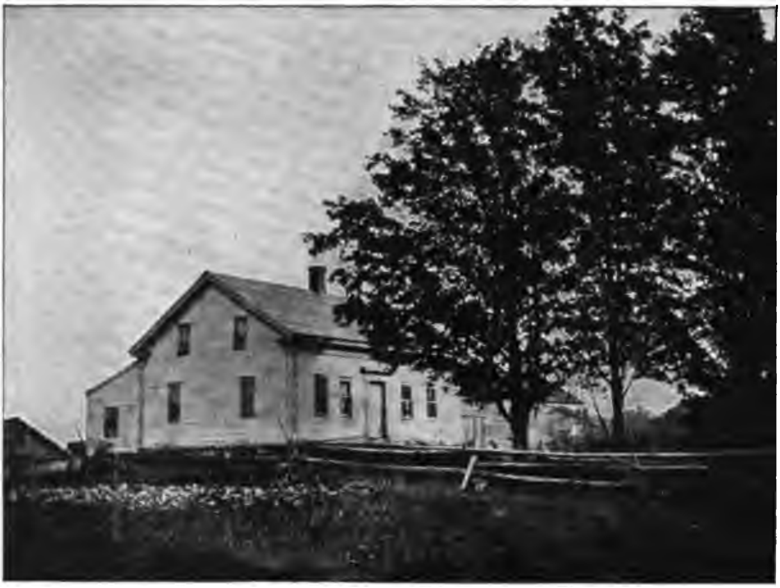


FIG. 66.— HOUSE ON FARM NO. 573, TOWN OF JEFFERSON, SCHOHARIE COUNTY.

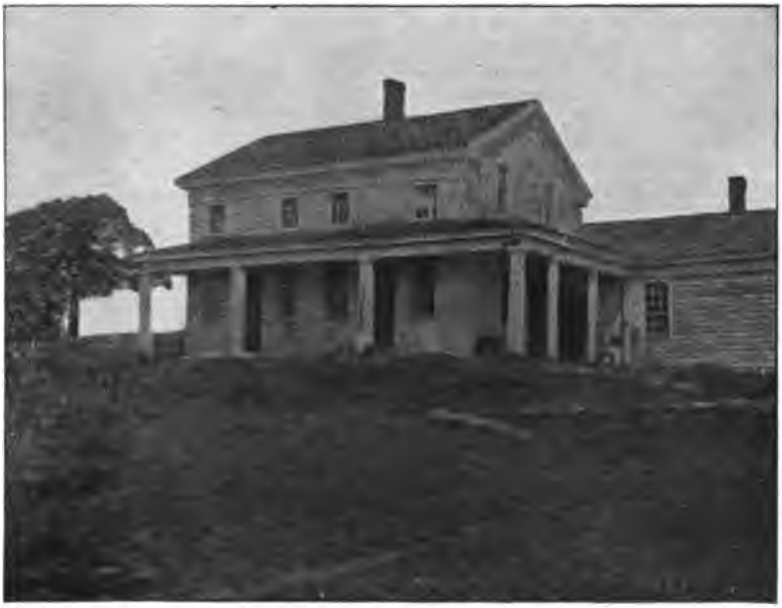


FIG. 67.— HOUSE ON FARM NO. 571, TOWN OF GILBOA, SCHOHARIE COUNTY.

highway. Surface of farm, half level, half sloping to northeast. Altitude about 700 feet. Soil, dark and yellow loam and lime. Acres in meadow, 36; in natural pasture, 20; in timber, 30, second growth, including about 200 sugar maples; acres tillable, 80. Fruit, 50 apple trees. Land best adapted to corn, oats, rye, hay and dairying. Stone, board and wire fences, in fair condition. Two-story frame house, 30x24, nine rooms, large porch, partly new and in good condition. Two adjoining barns, 36x48 and 30x60, 16 feet high; cow and horse stable in one barn; up-to-date poultry and hop house, 24x60. House and barns watered by wells; fields by springs and creek. Fox creek on one line. Reason for selling, to settle estate. Price, $2,800. Terms, $500 down, balance on mortgage. Will rent with option to buy. Address S. F. Taylor, owner, 306 Quail Street, Albany, N. Y.

No. 586.— Farm of 216 acres; located 7 miles from Central Bridge; 3 miles from station at Delanson, on line of D. & H. R. R.; ⅛ mile from school; 2¾ miles from churches and butter factory; 3 miles from milk station. Highways, state and country road, rather hilly. Nearest city, Schenectady, population 80,381, 15 miles distant, reached by rail and highway. General surface, rolling. Acres that can be used as meadow, about 150; in natural pasture, 30–35: in timber, 30–35, oak, pine and hemlock. Acres tillable, 150. Fruit, cherries, plums, pears for home use and about 75 apple trees. Adapted to rye, oats, barley, buckwheat and hay. Fences, stone and wire, in fair condition. House, 14 rooms in good condition. Outbuildings: dairy barn for 30 head of stock and 6 horses; barn 25x60, hog house, ice house and smoke house. Watered, house by well and cistern; barns by pond and well; fields by pond and spring. Occupied by owner. Price, $5,500. Terms, $3,000 cash. Address David S. Johnston, owner, Central Bridge, N. Y.

No. 587.— Farm of 140 acres; located 2 miles from Gallupville postoffice, R. D. No. 2; five miles from railway station at Schoharie, on line of Schoharie Valley R. R.; ⅛ mile from school; 2 miles from churches, butter factory and milk station. Highways, nearly level. Nearest city, Albany, population 107,979, distant 24 miles, reached by rail and highway. Nature of soil, lime rock. Acres that can be used as meadow, 115; number now so used, 60; in natural pasture, 10; in timber, 15, oak, pine, hemlock, hardwood. Acres tillable, 130. Fruit trees, 125 apple, 25 pear, 10 plum, 6 cherry, 1 apricot, 10 currants and a variety of berries. Adapted to wheat, rye, oats, buckwheat, corn, beans, potatoes, clover, timothy, alfalfa, hay. Stone wall and woven wire fence in first class condition. House, 35x40, twelve rooms, first class condition. Barns: No. 1, 45x50; No. 2, 24x40; No. 3, 25x30; No. 4, 25x20; No. 5, 15x20; tool house, 20x24; hen house, 15x20; wagon house, 25x35; hog pen, 12x15. House watered by wells; barns and fields by wells and springs. Near Warner's and Thompson's lakes, and Schoharie river. Farm now occupied by owner. Would give possession at once with all growing crops. Reason for selling, owner wishes to retire. Price, $6,000. Terms, half cash, balance on bond and mortgage. Would sell farm implements and live stock. Address Erskine W. Armstrong, owner, Schoharie, N. Y., R. D. 2.

No. 588.— Farm of 158 acres; located 3 miles from West Berne postoffice, R. D. No. 1; 8 miles from railway station at Schoharie on line of D. & H. R. R.; ⅛ mile from school; 3 miles from churches; 4 miles from butter factory; 8 miles from milk station and condensing plant. Highways, dirt and state road. Nearest village, Schoharie, population 1,124, distant 8 miles, reached by rail. Nature of soil, clay loam. Acres now used as meadow, 65; in natural pasture, 24; in timber, 37, pine, hemlock, oak, maple and black birch. Acres tillable, 121. Two apple orchards. Adapted to winter grain, corn, oats, barley and buckwheat. Stone, wire, board and rail fences in fair condition. Main house, two-story, wing attached, with woodhouse. Wagon house and horse stable attached, 36x70x18; shed and stable, 20x48x14; sheep house, 20x36x14; hog house, 24x48x18. House and barns watered by wells and running water; fields by springs. Farm now unoccupied. Reason for selling, old age. Price, $4,600. Will rent on shares or with option to buy. Address George Bellinger, owner, Gallupville, N. Y.

SCHUYLER COUNTY

Area, 335 square miles. Population 13,954. Annual precipitation, 36.99 inches. Annual mean temperature, 48.4°. Number of farms, 1,920. County seat, Watkins.

The county is situated in the south central part of the state. The lower part of Seneca Lake extends into this county. The surface slopes gently from each side to Seneca Lake and Kayuta Creek. Springs abound in every section of the county, furnishing an abundant supply of pure water, which finds its way to the lake through deep ravines. Near the lake, the soil is very fertile, sandy and gravelly loam predominating, while clay loam prevails in the rest of the county. Natural gas is found in large quantities. In this county are located the largest salt producing plants in the world. The leading crops are reported as follows: corn, shelled, 66.358 bushels; oats, 285,635 bushels; wheat, 86,890 bushels; barley, 41.363 bushels; rye, 29,576 bushels; dry beans, 52,859 bushels; potatoes, 80.079 bushels; hay and forage, 50,079 tons. The total value of all farm property is $9,263,801, an increase of 10 per cent. over the census of 1900. Domestic animals reported are: dairy cows, 5,140; horses, 4,858; swine, 5,218; sheep, 14,707; poultry, 101.089; total production of milk, 3,222,190 gallons which with the products of 5 milk stations and factories sold for $174,342.

The county is intersected by the Northern Central, a part of the Pennsylvania system, and branches of the Lehigh Valley and New York Central railroads. In this county is located the famous Watkins Glen State Park, which is visited by thousands of people annually. There are 105 district schools in the county and Cook Academy, one of the famous preparatory schools of the state, is located near Watkins. The county has 573 miles of improved highway and 10 miles of state and county roads. Most of the products of the county are sold in local markets, but Buffalo, New York, and Philadelphia furnish unlimited markets for the products of the county. Schuyler county lies in the fruit belt of the state, where special attention is given to the cultivation of apples, pears, peaches, grapes and small fruits.

TOWN OF CATHARINE

Population 1,192

No. 589.— Farm of 110 acres; 4¼ miles from Alpine P. O., R. D. 2; 6 miles from railway station at Odessa on line of L. V. R. R.; 1¼ miles from school; 2 miles from churches; 6 miles from milk station. Highways, good. Nearest city, Ithaca, population, 16,750, 11 miles distant, reached by highway. Surface of farm, level and rolling. Soil, gravel and loam. Acres in meadow, 60; in natural pasture, 19; in timber, 30, hemlock, chestnut and hardwood. Acres tillable, 80. Fruit, 60 apple, 4 pear and 3 plum trees. Best adapted to buckwheat, oats, barley and wheat. Fences, mostly stump and rail, good condition. House, 6 rooms, good condition. Outbuildings: barn, 32x44, gambrel roof, good condition, shed attached, 24x50, gambrel roof; horse and carriage barn, 32x44, good condition. Watered, house by well; barn by running water; fields by stream. Reason for selling, owner wants to retire. Price, $3,000. Terms, ½ cash, balance on mortgage. Address Lewis W. Ervay, owner, Odessa, N. Y.

No. 590.— Farm of 271 acres; located 3½ miles from Alpine P. O., R. D. No. 2, and railway station, on line of Lehigh Valley R. R.; 1 mile from school; 3½ miles from churches; milk collected at the door, and 3½ miles from condensing plant. Highways, hilly. Nearest city, Ithaca, population 16,750, 5 miles distant, reached by rail and highway. General surface, mostly level. Altitude, 1,900 feet. Nature of soil, clay loam. Acres that can be used as meadow, 140; now used as meadow, 30; in natural pasture, 20; in timber, 111, pine, hemlock, beech, etc.; 20 acres of new seeding. Acres tillable, 160. Fruit, 50 apple and 10 cherry trees, some grapes. Adapted to hay, oats, potatoes and buckwheat. Fences, rail and wire. Seven-room house, good condition, new shingle roof. Outbuildings: barn 32x46 with basement; barn 32x24; poultry house 13x40. Watered, house by well, barns by well, and fields by spring and creek. Occupied by owner. Reason for selling, ill health of wife. Price, $18 per acre. Terms, ½ cash, balance on mortgage. Ideal place for sheep and cattle. Price includes a pair of horses, all farming tools. Address E. L. Cozier, owner, Alpine, N. Y., R. D. No. 2.

TOWN OF HECTOR

Population 3,548

No. 591.— Farm of 60 acres; located 1 mile from post office, R. D.; 5 miles

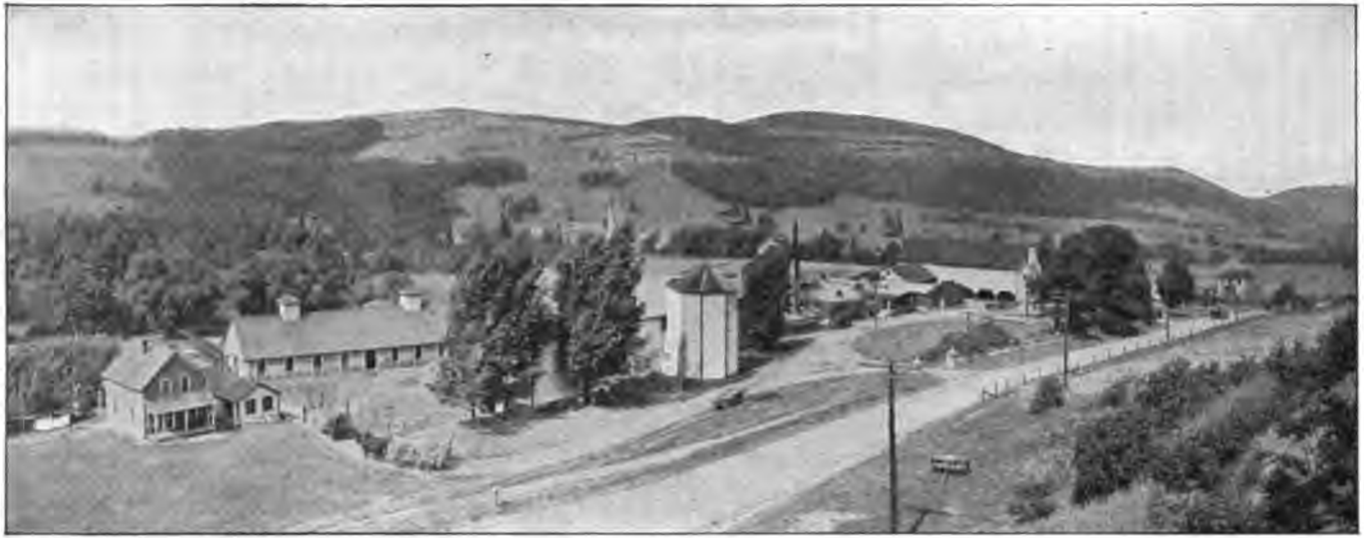


Fig. 68.— Buildings on Farm No. 585, Town of Wright, Schoharie County.

from railway station at Burdett on line of L. V. R. R.; 1 mile from school and church; 3 miles from milk station. Highways, in good condition. Altitude, 1,000 feet. Soil, gravelly loam. Acres in meadow, 10; in natural pasture, 10; in timber, 10, chestnut and oak. Acres tillable, 30. Fruit, 20 apple, 3 pear trees and some cherries. Adapted to oats, wheat, corn, potatoes, beans and buckwheat. Fences, rail and wire, poor condition. House, 10 rooms, good condition. Outbuildings: barn, 30x40, with straw shed attached; barn with basement, good condition. Watered, house by well; barn by spring; fields by spring. Reason for selling, ill health of owner. Price, $1,500. Terms, cash. Address Leroy Welch, owner, Burdett, N. Y.

No. 592.— Farm of 100 acres; located 1 mile from Hector P. O., R. D. No. 1, and railway station, on line of L. V. R. R.; ¼ mile from school; 1½ miles from church and 3 miles from milk station. Highways, good. Nearest village, Watkins, population, 2,760, 7 miles distant, reached by rail and highway. General surface of farm, sloping. Altitude, 900 feet. Nature and quality of soil, clay loam. Acres in meadow, 30; in natural pasture, 4; in timber, 7, hickory, oak and maple; second growth. Acres tillable, 90. Fruit, 3,500 peach, 175 cherry, 50 plum, 20 pear and 20 apple trees, also 12 acres of grapes. Best adapted to fruit, hay and grain. Fences, wire, in fair condition. Two good sized houses, 1 large brick, 11 room house with slate roof, porch and blinds. Frame house of 10 rooms with wide porch. Outbuildings: basement barn 30x60, poultry house, ice house, fruit house and garage. House watered by well and cistern, barns by running water, and fields by springs. Seneca Lake, which the farm borders for 40 rods, affords good fishing, boating, etc. Occupied by owner and tenant. Reason for selling, advanced age. Price, $120 per acre. Terms, half cash, balance on mortgage at 5%. Address Eugene Erway, owner, Hector, N. Y.

TOWN OF MONTOUR

Population 1,676

No. 593.— Farm of 105 acres; located 2 miles from Montour Falls P. O. and railway station on line of Northern Central R. R.; 1 mile from school; 2 miles from churches and milk station. Highways, somewhat hilly but good. Surface of farm, rolling. Soil, sand and loam. Acres in meadow, 20; in natural pasture, 8; in timber, 35, oak, hickory, walnut, pine, chestnut, basswood, etc. Acres tillable, 70. Fruit, apples, peaches, plums and grapes. Fences, wire and rail, poor condition. House, 24x32; wing, 15x24, 2 stories, 11 rooms, in good condition. Outbuildings:. a good barn, 42x48; chicken coop, etc. Watered, house, by well; barns, by springs; fields, by springs. Reason for selling, other business. Price, $3,500. Terms, $500 cash, remainder on mortgage at 5%. Address Joseph A. Fitzpatrick, owner, 526 West Clinton street, Elmira, N. Y.

No. 594.— Farm of 80 acres; located 1 mile from P. O. and 1 mile from railway station at Montour Falls on line of Northern Central R. R.; ½ mile from trolley line; 1 mile from school; 1½ miles from churches and milk station; ¼ mile from butter factory. Highways, a little rolling. Surface of farm, comparatively level. Soil, gravelly. Acres tillable, 70. Fruit, cherries, plums, pears and apple orchards. Adapted to wheat, rye, oats, buckwheat, corn, and beans. Fences, mostly wire, fair condition. House, 2 stories, 9 rooms, good condition. Outbuildings: corn house, 14x25; barn, 30x50, good condition, and 2 sheds in fair condition. Watered, house and barn by well; fields, by springs. Occupied by tenant. Reason for selling, wish to retire. Price, $4,000. Terms, $2,000 down, balance on mortgage at 6%. Address Mrs. Alice Drake, owner, Montour Falls, N. Y. Will rent.

No. 595.— Farm of 113 acres; located 3½ miles from Montour Falls P. O., R. D. No. 2; 2 miles from railway station at Odessa, on line of L. V. R. R.; 1 mile from school and churches; 3 miles from butter factory and cheese factory and 2 miles from milk station. Highways, dirt and macadam roads. Surface of farm, rolling. Altitude, 1,285 feet. Nature of soil, clay loam and some black soil. Acres that can be used as meadow, 60; in natural pasture, 30; in timber 25, pine, hemlock, oak, chestnut and ash. Acres tillable, 80. Fruit, 100 apple, 20 pear, 15 plum and 8 cherry trees, also 20 grapevines. Best adapted to grain, beans and potatoes. Fences, wire, board and rail. Large 10-room house, in fair condition. Basement barns 32x59 and 28x37. House watered by well; barns, by well, and fields, by spring. Occupied by tenant. Reason for selling, other business. Price, $6,500. Terms, ½ cash, balance on mortgage. Will rent only to sheep farmer on shares and will furnish the sheep. Address C. L. Frost, owner, Montour Falls, N. Y.

No. 596.— Farm of 80 acres; located 1½ miles from Odessa P. O. and railway station, on line of L. V. R. R.; ½ mile from school; 1½ miles from churches, milk station and condensing plant. Highways, good. Nearest village, Watkins, population, 760, 5 miles distant, reached by rail and highway. General surface of farm, sloping. Nature and quality of soil, sandy and gravelly loam. Acres that can be used as meadow, 60; in natural pasture, 10; in timber, 5, beech, oak and chestnut. Acres tillable, 70. Fruit, 500 peach, 100 apple, 10 pear and 10 cherry trees. Best adapted to potatoes, beans, hay and corn. Fences, rail and wire, all new. Two-story house 20x30, new roof. Outbuildings: barn 40x50, leanto 30x60, half newly roofed; poultry house, new pig pen and corn crib. House watered by well, barns by well and springs, and fields by springs. Occupied by tenant. Reason for selling, other business. Price, $4,200. Terms, cash preferred, but will take $3,000 cash, balance on mortgage. Will rent on shares. Address Louis Catlin, owner, Odessa, N. Y.

No. 597.— Farm of 71 acres; located 1½ miles from Odessa P. O., R. D. No. 1 and railway station, on line of Lehigh Valley R. R.; 1½ miles from school and churches; 4 miles from butter factory; 6 miles from cheese factory and 1½ miles from condensing plant. Highways, dirt road. Nearest city, Elmira, population 40,093, 18 miles distant, reached by rail and highway. General surface, level, except pasture. Nature of soil, gravel and muck. Acres that can be used as meadow, 43; in natural pasture, 15; in timber, 4, for fuel. Acres tillable, 43. Fruit, 9 acres of apples, grapes and enough of other fruit for home use. Adapted to all kinds of crops. Fences, woven wire and rail. Twelve-room house, good condition, with large porch. Outbuildings, hay and granary, 32x36; carriage and horse barn, 36x40; shed, 30x60. Watered, house, by fine well and cistern; barns, by 2 wells, and fields, by spring. Occupied by owner. Reason for selling, other business. Price, $4,800. Terms, $2,700 cash, balance on mortgage. Address Alonzo D. Brisco, owner, Montour Falls, N. Y.

TOWN OF ORANGE.

Population 982

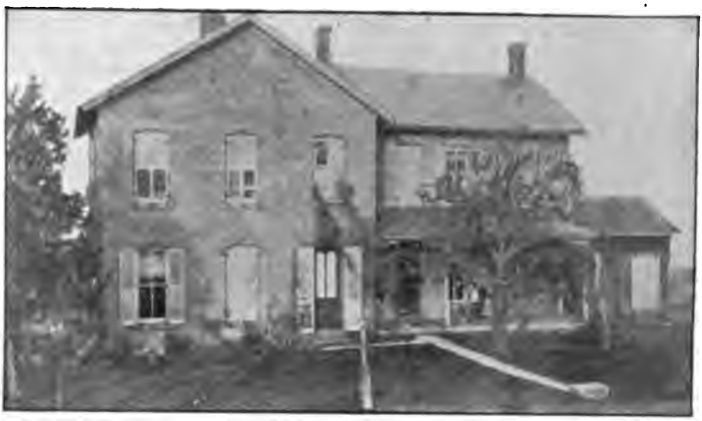
No. 598.— Farm of 188½ acres; located 2½ miles from Monterey P. O.; 9 miles from Beaver Dams, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from church. Highways, good. General surface, rolling. Altitude, 1,400 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 135; in natural pasture, 40; in timber, 8 or 10. Acres tillable, 135. Fruit, 50 apple trees. Adapted to beans, buckwheat, corn and wheat. Fences, stump and rail. No house. Outbuildings, a good hog house but no barn. Watered, house, by springs, and barns, by creek. Operated by owner. Reason for selling, other business. Price, $8 per acre. Terms, cash. Address D. W. Hagadorn, owner, Bradford, N. Y.

SENECA COUNTY

Area, 346 square miles. Population, 25,249. Annual precipitation, 39.55 inches. Annual mean temperature, 49.1°. Number of farms, 2,085. County seat, Waterloo.

This county lies in the central part of the state between Seneca and Cayuga Lakes.

The greater part of the surface is undulating and elevated. In the northern part the surface is level with the fertile sandy loam found in all sections of the "great level." The surface rises toward the south in gentle rolls to an elevation of about 800 feet in the extreme southern part. In the central portion of the county is found a dark loam with clay subsoil, while in the southern part, clay loam predominates. Gypsum and limestone are found in the county. The crop reports show: corn, shelled, 210,289 bushels; potatoes, 74,858 bushels; oats, 515,303 bushels; wheat, 388,675 bushels; buckwheat, 60,474 bushels; barley, 51,191 bushels; dry beans, 31,089 bushels; hay and forage, 52,400 tons. The total value of all farm property is $14,589,014, being an increase of 32 per cent. in ten years. Domestic



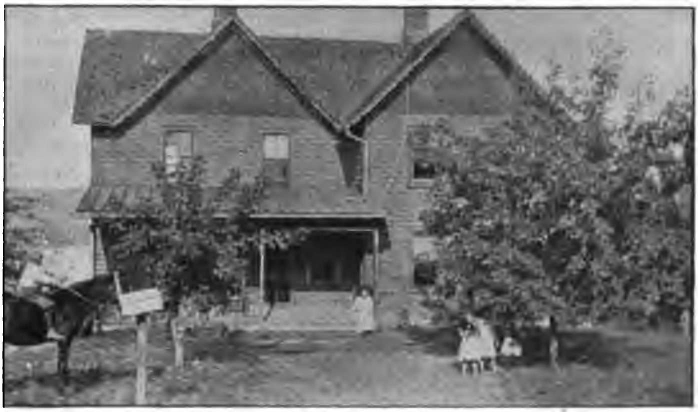


FIG. 69.— HOUSES ON FARM NO. 592, TOWN OF HECTOR, SCHUYLER COUNTY.

animals reported: dairy cows, 4,992; horses 6,133; swine, 8,108; sheep, 6,433; poultry, 123,629; production of milk, 3,607,915 gallons valued at $224,120.

The N. Y. C. & H. R. R. R. and two branches of the Lehigh Valley railroad intersect the county. In the northern part, an electric line passes through Seneca Falls. The Willard Insane Asylum with large and costly buildings is located at Ovid. Flour mills, malt houses and distilleries are located at Waterloo. The system of education is of the high character demanded by the state and the needs of the rural sections are fully met by 91 district schools conveniently located. The county has 31 miles of state and county roads and 413 miles of improved highways. The agricultural organizations consist of one Pomona grange. 11 subordinate granges, county agricultural society and county beekeepers society Seneca county, like many other of New York counties, is famed for the beauty of its scenery.

TOWN OF FAYETTE

Population 2,640

No. 599.— Farm of 303 acres; located 6 miles from Geneva P. O., R. D.; 1¼ miles from railway station at Yale, on line of L. V. R. R.; ½ mile from school; 3 miles from churches and 1¼ miles from milk station. Highways, good. Nearest city, Geneva, population 13,232, reached by rail, highway or water. Surface of farm, gentle slope to Seneca Lake. Altitude, 475 feet. Soil, dark gravel and clay loam. Acres that can be used as meadow, 200; in timber, 30, oak, walnut, maple, etc. Acres tillable, 200. Fruit, 17 acres Bartlett pears, 30 acres apples, 4 acres apricots, Kieffer pears, plums and peaches. Adapted to all crops. Fences, cedar posts and woven wire, in fine condition. Houses, fine colonial house 12 rooms, 2 first class farm houses, 2 good tenant houses. Outbuildings: main barn 30x70, with gambrel roof, cow barn 30x65, with stanchions for 34 cows, drinking basins, large silo, horse barn 30x40, carriage house, shop, poultry house, hog house, corn crib, ice house, etc. Watered, house by well, barns by springs, fields by lake and wells. Seneca Lake borders west side of farm. Price on application. Term, $15,000 first payment, balance on mortgage at 5%. This place was originally three farms and can be subdivided and sold in sections. Address Miss M. T. Middlewood, owner, 10 Lafayette avenue, Geneva, N. Y.

No. 600.— Farm of 236 acres; located 1 mile from Kendaia, on line of L. V. R. R.; 1 mile from school, churches and milk station; 4 miles from butter factory. Highways, very good. Nearest city, Geneva, population 13,232, reached by rail and highway. General surface, slightly rolling. Nature of soil, black loam. Acres that can be used as meadow, 200; in natural pasture, 36; in timber, 10, oak and hickory. Acres tillable, 200. Fruit, 2 acres of apples Adapted to hay, wheat, oats, corn and alfalfa. Fences, fair. House, 11 rooms, in good condition. Outbuildings: large barn and tool house. Watered, house. by well; barns and fields, by spring Occupied by tenant. Reason for selling, to settle an estate. Price, $18,000. Terms, easy. Address E. A. Nordstrom, owner, Seneca Falls, N. Y. Will rent.

No. 601.— Farm of 200 acres; located 3 miles from Fayette; 6 miles from railway station at Romulus, on line of L. V. R. R.; ½ mile from school; 1 mile from churches. Highways, 3 miles to state road. Nearest village, Seneca Falls, population, 7,018, 10 miles distant, reached by highway. General surface, slightly rolling. Nature of soil, clay loam. Acres that can be used as meadow, 20; in timber, 5. Acres tillable, 160. Fruit, 6 acres of apples. Adapted to alfalfa, wheat, corn, barley and oats. Fences, woven wire, in good condition. 2 complete sets of buildings, can be divided into two farms. Outbuildings: basement barn, nearly new, ice house, garage and four large barns. Watered, house and barns by well and windmill; fields, by spring. Farm borders on Cayuga Lake. Occupied by owner. Reason for selling, wish to retire. Price, $18,000. Terms on application. Address E. A. Nordstrom, owner, Seneca Falls, N. Y.

No. 602.— Farm of 235 acres; located 6 miles from Geneva postoffice, R. D.; 1¼ miles from railway station at Yale, on line of L. V. R. R.; ½ mile from school; 3 miles from churches and 1¼ miles from milk station. Highways, good. Nearest city, Geneva, population 13,232, reached by rail, highway or water. Surface of farm gentle slope to Seneca Lake. Altitude, 475 feet.

Soil, dark gravel and clay loam. Acres that can be used as meadow, 150; in timber, 25, oak, walnut, etc. Acres tillable 150. Fruit, 17 acres Bartlett pears, 20 acres apples, 3 acres plums, apricots and peaches. Adapted to all crops. Fences, cedar posts and woven wire, in fine condition. Houses: fine colonial house of 12 rooms; 2 good tenant houses. Outbuildings: main barn, 30x70, with gambrel roof; cow barn, 30x65, with stanchions and drinking basins for 34 cows; large silo; horse barn, 30x40; carriage house; shop; poultry house; hog house; corn crib; ice house, etc. House watered by well; barns by spring with windmill; fields, by lake and well. Seneca Lake borders west side of farm. Price and terms on application. Address Miss M. T. Middlewood, owner, 10 Lafayette Ave., Geneva, N. Y.

No. 603.— Farm of 68 acres; located 6 miles from Geneva postoffice, R. D.; 1¼ miles from railway station at Yale, on line of L. V. R. R.; ½ mile from school; 3 miles from churches. Highways, good. Nearest city, Geneva, population 13.232, reached by rail, highway or water. Surface of farm, gentle slope to Seneca Lake. Altitude, 475 feet. Soil, dark gravel and clay loam. Acres that can be used as meadow, 53; in timber, 5. Acres tillable, 50. Fruit, 9 acres apple orchard, 1 acre pears and peaches. Adapted to all crops. Fences, cedar posts and woven wire, in fine condition. Houses, excellent farm house, 12 rooms. Good 7-room house. Outbuildings: barn, 30x50; tool shed, 90x40; cow house; chicken house, etc. Watered by 3 wells. Seneca Lake borders west side of farm. This place was originally two farms, one of 48 acres with 7-room house and outbuildings as described, 5 acres timber and remainder tillable land; the other 20 acres, with excellent 12-room house and 10 acres orchard, remainder tillable land; will sell as one or as two farms. Price for 48 acres, $5,000. Price for 20 acres, $3,000. Easy terms. Address Miss M. T. Middlewood, owner, 10 Lafayette Ave., Geneva, N. Y.

TOWN OF LODI

Population 1,399

No. 604.— Farm of 206 acres; located 2 miles from Lodi, on line of L. V. R. R.; ¼ mile from school and 2 miles from churches. Nature of highways, state road. Nearest village, Lodi, 700 population, reached by rail and highway. General surface, level. Nature of soil, light clay loam. Acres that can be used as meadow, 198; in timber, 8. Acres tillable, 198. Fruit, 30 acres of peaches and 10 acres of cherries. Adapted to fruit and alfalfa. Fences, good. House, 10 rooms with steam heat and 2 bath rooms. Barns recently burned. Watered, house and barns by running water. Price, $30,000. Terms, ½ cash and remainder on mortgage. Address F. R. Stevens, owner, Geneva, N. Y.

TOWN OF SENECA FALLS

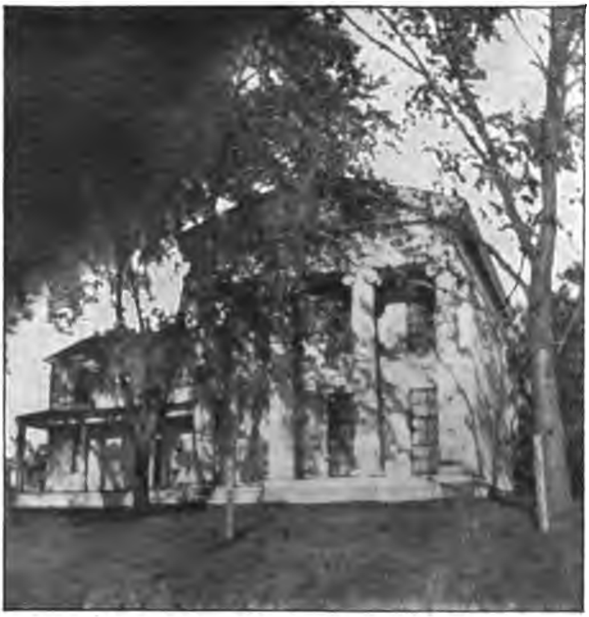
Population 7,631

No. 605.— Farm of 230 acres; located 2 miles from postoffice at Seneca Falls, R. D. No. 1; 2 miles from railway station at Seneca Falls, on line of N. Y. C. R. R. and L. V. R. R; 2 miles from school and churches. Highways, state road. Nearest village, Seneca Falls, population 7,018, distant 2 miles, reached by highway. General surface of farm, level. Nature of soil, sandy loam. Acres that can be used as meadow, 90; number now used as meadow, 60; in natural pasture, 60; in timber, 25, elm, maple and second growth ash and hickory. Acres tillable, 180. Four acres of apples. Best adapted to grain and hay. Woven and barbed wire fences in good condition. House of 14 rooms in fair condition; 7-room tenant house. Barn, 80x40, ell 40 feet; grain barn, 50x30 feet; horse barn, 16x36 feet; cow barn in fair condition; new hog house, 16x20 feet; tool shed and ice house. House watered by well and 2 cisterns; barns by well; fields by brook and well; tenant house by spring and cistern. Farm now occupied by owner. Reason for selling, too great a responsibility for women. Price, $18,000. Terms cash. Farm has sand and gravel bank. Address Jessie and Maud Savage, Seneca Falls, N. Y.

TOWN OF WATERLOO

Population 4,764

No. 606.— Farm of 167 acres; located 1 mile from Waterloo P. O., R. D. 3, and railway station on line of N. Y. C. R. R.; 1 mile from school and churches. Highways in good condition. Surface of farm, slightly rolling. Altitude, about 400 feet. Soil, sandy and sandy loam. Acres in meadow, 30; in natural pasture, 20; in timber, 10, little value. Acres tillable, 150. Fruit, old apple orchard of about 15 trees, young apple orchard of about 40 trees. Adapted to



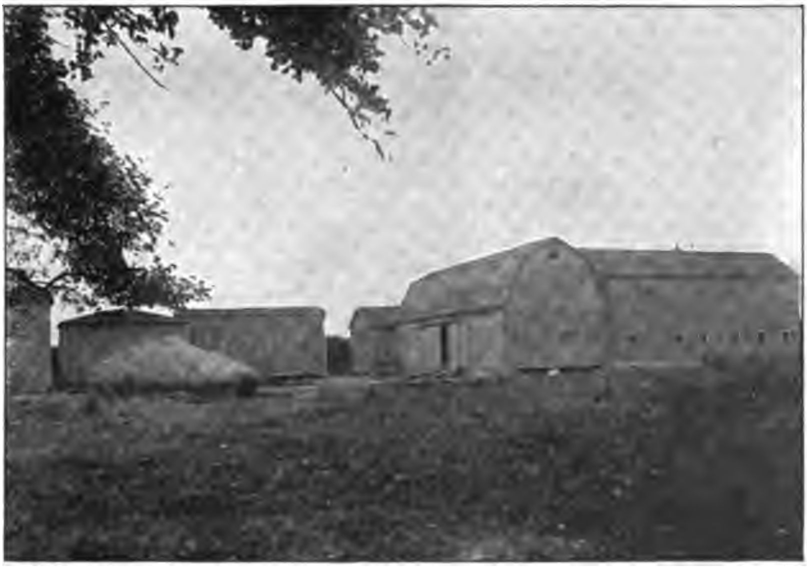


FIG. 70.— MAIN HOUSE AND BARNS ON FARM NO. 599, TOWN OF FAYETTE, SENECA COUNTY.

vegetables, oats, rye, corn, etc. Fences, mostly wire, good condition. House, 8 rooms, furnace and gas, good condition. Outbuildings: horse and grain barn, 32x60; cow shed, 24x40; tool shed, 20x48; poultry house, 10x24, good condition. Watered by well and creek. Seneca River a few rods from farm. Occupied by tenant. Reason for selling, owner a widow. Price, $75 per acre. Terms, cash or part cash. Address Mrs. Stella Harris, owner, Interlaken, N. Y.

No. 607.— Farm of 164 acres; located 2½ miles from Waterloo P. O., R. D. 5, and railway station on line of N. Y. C. R. R.; 2 miles from school; 2½ miles from churches. Highways, good. Surface of farm, slightly sloping. Altitude, 450 feet. Soil, dark loam and black muck. Acres in meadow, 80; in timber, 20, maple and elm. Acres tillable, 130. Fruit, apples and pears. Adapted to all crops grown in this climate. Fences, mostly wire, part good and part in fair condition. House, 10 rooms, good condition. Outbuildings: grain and hay barn, 35x60, new; also sheep barn, hog house, poultry house, cow shed, horse barn and carriage house. Watered by wells. Occupied by tenant. Price, $10,000. Terms, mostly cash. Address Miss Susie E. Dowden, owner, Waterloo, N. Y.

STEUBEN COUNTY

Area, 1,490 square miles. Population, 83,363. Annual precipitation, 34.97 inches. Annual mean temperature, 49.1°. Number of farms, 7,363. County seat, Bath.

This county is situated in the southwestern part of the state bordering on Pennsylvania. It is drained by the Canisteo, Cohocton and Tioga Rivers, which unite in the southeastern part of the county and form the Chemung River. Cayuga Lake forms part of its northeast boundary.

The surface is a rolling table land with broad irregular hills and deep valleys. A chain of low hills extends on both sides of the valleys of the Cohocton and Canisteo Rivers and extends across the county from the northeast to the southwest. Between these elevations is a wide fertile valley. The soil on the uplands is a deep gravelly loam, while clay loam is found in the valleys and in the eastern half of the county with a subsoil of clay and lime. In the southeast corner, a black loam soil is found in the valleys. Woodlands of oak, ash, pine, sugar maple, beech, chestnut and other trees cover nearly one-third of the entire area. Excellent building stone is found in the Devonian sandstone outcroppings. The county ranks first in the production of honey, second in buckwheat and fourth in sugar. Some of the principal crops are: corn, shelled, 117,405 bushels; oats, 1,544,471 bushels; wheat, 169,177 bushels; buckwheat, 195,846 bushels; rye, 62,336 bushels; potatoes, 762,828 bushels; hay and forage, 169,727 tons. The value of all farm property is $37,369,643, an increase of 14 per cent in ten years. Domestic animals are reported as: dairy cows, 31,606; horses, 17,774; swine, 16,283; sheep, 29,208; poultry, 330,945; production of milk, 16,430,763 gallons; this included with the products of 42 milk stations and factories in the county sold for $1,325,568.

There are 45 miles of state and county roads and 2,862 miles of graded and im- and 369 district schools with many standard high schools provide the proved roads; means of education for the farmers' children. Several trunk lines intersect the county, making the transportation facilities excellent and ample. The New York State Soldiers Home is located at Bath. Corning, known as the Crystal City, is the site of extensive glass works. Hornell is a leading railroad town where many important manufactories are located. There are 38 agricultural societies in the county serving the best interests of the farmer.

TOWN OF BATH

Population 8,172

No. 608.— Farm of 41½ acres; 3½ miles from Bath P. O. and railway station; 4½ miles from Savona railway station; ¾ mile from school. Soil, yellow loam and gravel. Acres in meadow, 29; in pasture, 7; in timber, 5½. House, 12x16, with wing, 8x12, in poor condition. Barn and addition, 20x30, with shed and stable. Watered by spring and cistern. Timber land comprises a fine thrifty grove of young white or cork pine; also from 5,000 to 8,000 feet of large sawing pine. Fences, pole and rail, in poor condition. Price, $850. Terms, ¼ down, balance to suit purchaser. Owner will rent with option to buy. Name and address of owner, John H. Bowlby, Bath, N. Y.

No. 609.— Farm of 150 acres; located 2¼ miles from Bath P. O., R. D. 1, and railway station on line of D. L. & W. and Erie Railways; 1-20 mile from school; 2 miles from milk station, and churches; 3½ miles from butter factory; 4 miles from cheese factory. Highways, state road. Surface of farm, level. Altitude, 1,000 feet. Soil, loam, gravel and muck. Acres in meadow, 50; in natural pasture, 40; in timber, 7, hemlock, pine, chestnut, etc. Acres tillable, 130. Fruit, apples. Adapted to wheat, rye, oats, barley, corn, tobacco, alfalfa and garden crops. House, 20x26, with wing, 18x24, and wing, 10x12, concrete porch, new; also tenant house. Outbuildings: barn, 30x62; barn, 20x44; barn. 14x20; silo, concrete stable, 26x34, new; barn, 38x70. Watered by well, windmill and two trout streams. Occupied by tenant. Reason for selling, owner in other business and cannot attend to farm. Price, $13,750. Terms, ¼ cash, balance to suit purchaser. Address Mrs. Helene Bowlby, owner, Bath, N. Y.

No. 610.— Farm of 166 acres; located 4 miles from Kanona; 4½ miles from railway station at Bath, on line of Erie R. R.; school house on farm; 3 miles from churches; 4 miles from butter factory, milk station and condensing plant; cheese factory on farm. Highways, good. Nearest village, Bath, population 4,173, 4½ miles distant, reached by highway. General surface, rolling and level. Acres that can be used as meadow, 116; in natural pasture, about 25; in timber, about 25, beech, hemlock, maple and pine. Acres tillable, 116. Fruit, apples, plums, cherries and currants. Adapted to corn, wheat, oats, buckwheat and potatoes. Fences, wire and board, in fair condition. House, 28x28, 2 stories. Outbuildings: 2 barns, 30x40 and 1 with basement and shed 15x40. Watered, house by spring, and fields by springs. Occupied by owner. Reason for selling, ill health. Price, $50 per acre. Terms, $2,500 cash and remainder on time to suit purchaser. Address, Sterling Brooks, owner, Bath, N. Y.

TOWN OF BRADFORD

Population 629

No. 611.— Farm of 100 acres; located ¼ mile from Bradford P. O., R. D. No. 2; 7 miles from Hammondsport, on line of Erie and D. L. & W. R. Rs.; ¼ mile from school and churches; 2 miles from cheese factory; ¼ mile from milk station. Nearest large village, Bath, population 4,173, 12 miles distant, reached by rail or highway. General surface, rolling and level, sloping to southeast. Altitude, 1,100 feet. Nature of soil, clay loam. Acres in meadow, 40; in pasture, 10; in timber, 9, pine, oak, ash and maple. Acres tillable, 90. Fruit, 4 acres, 15-year-old apples, 150 young trees, small fruit for home use. Adapted to general farm crops and stock raising. Fences, rail and wire. House, 8 rooms and wood shed, newly painted, good condition. Outbuildings: barn, 30x60; wagon barn, 30x36, both with basement; corn house, 16x20; separator house, 6x8; small poultry house, all in fair condition. House watered by running water; barns, by running water; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, $3,000 cash, balance to suit purchaser. Address E. Curtis Switzer, owner, Bradford, N. Y.

TOWN OF COHOCTON

Population 3,103

No. 612.— Farm of 84 acres; located 6 miles from Cohocton, R. D. No. 3; 5 miles from Wallace, on line of D. L. & W. R. R.; 1 mile from school; 1¼ miles from churches; 6 miles from butter factory; 2 miles from cheese factory and 5 miles from milk station. Highways, hilly but usually good. Nearest city, Hornell, population 14,352, 14 miles distant, reached by highway. General surface, rolling. Altitude, 1,600 ft. Nature of soil, gray loam. Acres that can be used as meadow, 79; in timber, 5, beech, maple, basswood and ash. Acres tillable, 79. Fruit, a few pear, cherry and plum trees and currant bushes. Adapted to hay and grain. Fences, barbed and American wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: main barn, 32x44, wagon house 16x20 and shed 12x16, all in fair condition. Watered, house and barns by well, and fields by creek. Unoccupied. Reason for selling, ill health. Price, $3,000. Terms, $1,000 cash and $100 per year and interest. Address Henry C. Crouch, owner, Cohocton, N. Y.

TOWN OF DANSVILLE

Population 1,269

No. 616.— Farm of 98 acres; located 8 miles from postoffice at Hornell, R. D. No. 2; 4 miles from railway station at Arkport, on lines of Erie R. R. and D. L.

Fig. 71.— View of Farm No. 613, Town of Dansville, Steuben County.

Fig. 72.— View on Farm No. 634, Town of Rockland, Sullivan County.

& W. R. R.; ½ miles from school; 3 miles from church; ½ miles from cheese factory; 4 miles from milk station and condensing plant. Nature of highways, some hills, but good. Nearest village, South Dansville, population about 200, distant 3 miles, reached by highway. General surface of farm, somewhat rolling. Altitude, 1,900 feet. Acres that can be used as meadow, 80; number now so used, 30; in natural pasture, 6; in timber, 8, hemlock, beech, maple, cherry and ash. Acres tillable, 80. Apple and pear trees. Adapted to all crops. Fences in fair condition. New house, 28x28, nine rooms. Barns, 60x36 and 20x42, condition of both good. House watered by well and cistern; barns by well; fields by creek. Loon Lake 5 miles distant. Farm now occupied by owner. Reason for selling, other business. Price, $4,500. Terms, about $3,000 down. Will rent with option to buy. Address Myron W. Wagner, owner, Hornell, N. Y., R. D. 2.

No. 614.— Farm of 95 acres; located at South Dansville postoffice; 4 miles from railway station at Rogersville, on line of R. L. & N. R. R.; 5 minutes walk to school and church; 2 miles from cheese factory; 5 miles from milk station. Good highways, improved. Nearest city, Hornell, population 14,352, distant 12 miles, reached by rail and highway. General surface of farm, hilly, rolling and level. Nature of soil, gravel and loam. Acres that can be used as meadow, 75; number now so used, 50; in natural pasture, 30; in timber, 8, hardwood. Acres tillable, 85. Fruit trees, 40 apple, 10 peach, 10 plum, 6 cherry, 10 pear, raspberries, grapes and strawberries. Adapted to potatoes, corn, oats, wheat, barley and buckwheat. Wire fences in good conditions. Large 16-room house, condition good. Barns: grain, 36x44; horse, 24x30; tool and carriage, 20x24; hog, 10x12; ice house, 12x16. House watered by well; barns and fields by stream. Farm now occupied by owner. Reason for selling, old age. Price. $4,750. Moderate terms. Will rent on shares, or possibly with option to buy. Address Allyn H. Briggs, owner, South Dansville, N. Y.

TOWN OF HOWARD

Population 1,386

No. 615.— Farm of 160 acres; located 7 miles from postoffice at Kanona, R. D. No. 2; 7 miles from railway station at Kanona, on lines of Erie and D. L. & W. R. Rs.; 1 mile from school; 2½ miles from churches; 2 miles from butter factory; 2½ miles from cheese factory; 3 miles from milk station; 12 miles from condensing plant. Highways, hilly but good. Nearest city, Hornell, population 14,352, distant 10 miles, reached by highway. General surface of farm, rolling. Altitude, 1,816 feet. Nature of soil, gravel and clay. Acres that can be used as meadow, 135; number now so used, 40; in natural pasture, 5; in timber, 25, some virgin hemlock, rest pine, oak, beech. Acres tillable, 135. Fruit trees, 60 apple; quinces, plums, pears, currants and red raspberries. Adapted to wheat, corn, potatoes, oats, barley, buckwheat and hay. Wire and rail fences in good condition. House of 16 rooms, condition good. Barn No. 1, 30x70; shed, 20x40; No. 2, 30x40; No. 3, 26x60 with a shed 20x40; hog house, 16x30; ice house, 12x16; corn house and granary, 12x20; stone smoke house. House watered by running spring in kitchen; barn No. 1 by well and No. 3 by spring; fields by springs. Farm occupied by owner; never has been rented or leased. Reason for selling, ill health. Price, $7,200. Terms, $3,000 cash and first mortgage with easy payments. Excellent dairy and sheep farm. Address John W. Willis, owner, Kanona, N. Y., R. D. 2.

TOWN OF JASPER

Population 1,253

No. 616.— Farm of 240 acres; located 4½ miles from railway station at Greenwood, on line of N. Y. & P. R. R.; ½ mile from school and churches; 4 miles from butter factory; ¾ mile from cheese factory; 4½ miles from milk station and condensing plant. Good highways. Nearest city, Hornell, population 14,352, distant 15 miles, reached by rail and highway. General surface of farm, level and slightly rolling. Nature of soil, variety of red and black clay loam. Acres used as meadow, about 85; in natural pasture, about 25; in timber, about 70; including sugar bush, valued at $2000. Some young apple trees; old orchard of little value. Adapted to all kinds of grain, corn, potatoes, hay; also dairying. Fences in fairly good condition. House, 12 rooms, good condition, needs painting; tenant house. Barn, 36x56, with basement and gambrel roof. House watered by pump in kitchen; barns by running water. Situated near Bennetts creek. Farm occupied by tenant for part of year. Reason for selling. old age. Price, $27 per acre. Cash preferred; but owner would accept $2,000 down and rest on easy payments with right party. Address Mr. and Mrs. Michael O'Kieff, Rexville, N. Y.

TOWN OF LINDLEY

Population 1,181

No. 617.— Farm of 307 acres; located ½ mile from Lindley P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; ½ mile from school, churches and cheese factory; 2 miles from milk station and condensing plant. Nearest city, Corning, population 13,459, 12 miles distant, reached by rail or good highway. General surface of farm, 70 acres of good river flats, remainder, rolling. Altitude, 1,029 feet. Nature of soil, sandy loam. Acres in meadow, 45; in pasture, 200; in timber, 60, oak and pine, estimated at 200,000 feet. Acres tillable, 150. Fruit, 10 apple trees. Adapted to tobacco, alfalfa, hay, corn, oats, potatoes and wheat. Fences, wire and board, in good condition. House, 12 rooms, fair condition. Outbuildings: 2 basement barns, 36x48; 2 tobacco sheds, 28x64; 1 horse barn, 32x32; 1 cow barn, 28x80; 1 corn crib, 24x32. House and barns watered by running water; fields, by creeks. Occupied by owner. Reason for selling, ill health. Price, $9,000. Terms, $2,000 cash, balance to suit purchaser. Address Alexander Brown, owner, Lindley, N. Y.

TOWN OF URBANA

Population 3,096

No. 618.— Farm of 100 acres; located 4 miles from railway station at Hammondsport, on line of B. & H. R. R.; 1 mile from school; 1 mile from creamery; 2 miles from churches and 9 miles from milk station. Highways, good. Nearest village, Hammondsport, population, 1,560, 4 miles distant, reached by highway. General surface, slightly rolling. Altitude, 1,500 ft. Nature of soil, gravelly loam. Acres that can be used as meadow, 60; now in meadow, 40; in natural pasture 15; in timber, 15, second growth oak, maple and chestnut. Acres tillable, 75. Fruit, 40 apple and some plum trees. Adapted to wheat, corn, oats, barley and buckwheat. Fences, fair. House, 10 rooms, in fair condition. Outbuildings: barn 30x40 with shed attached, wagon barn 26x36, tool house 20x24, poultry house and hog house. Watered, house by well and cistern; barns by well, and fields by springs. Unoccupied. Reason for selling, other business. Price $2,800. Terms, ½ cash and remainder on mortgage. Address Fred W. Locke, owner, Hammondsport, N. Y. Will rent.

TOWN OF WHEELER

Population 892

No. 619.— Farm of 86 acres; located 4 miles from postoffice (R. D. No. 2) and railway station at Avoca, on lines of Erie and D. L. & W. R. Rs.; 1 mile from school; 4 miles from churches; 2½ miles from cheese factory; 8 miles from milk station. Highways, good. Nearest village, Bath, population 4,173, distant 12 miles, reached by rail and highway. General surface of farm hilly and rolling. Nature of soil, gravel. Acres that can be used as meadow, 40; acres now used as meadow, 20; in natural pasture, 15; in timber, 7 or 8, second growth, beech. Acres tillable, 50. Fruit, 20 apple trees, 2 pear, 1 cherry, 6 peach. Best adapted to potatoes and corn. Good patent wire fences. House of 9 rooms in fair condition. Barn, 30x40; basement will soon need a few repairs. House, barns and fields watered by running water. Cohocton River 3 miles distant; Keuka Lake 15 miles. Farm now occupied by tenant. Price, $2.500. Terms, $600 to $800 down. Will rent for cash. There is also a good stone engine house or work shop. Address Frank Brasted and Sarah Morrisson, Avoca, N. Y., R. D. 3.

No. 620.— Farm of 220 acres; located 1 mile from postoffice and railway station at Wheeler, on line of Kanona & Prattsburg R. R.; 1 mile from school, church, cheese factory, and milk station; 7 miles from condensing plant. Good highways. Nearest village, Bath, population 4,173, distant 7 miles, reached by highway and rail. General surface of farm, rolling and level; woodland hilly. Nature of soil, clay and gravelly loam. Acres that can be used as meadow, 160; acres now used as meadow, 60; in natural pasture, 20; in timber, 40, pine, chestnut, basswood, ash, beech, maple. Acres tillable, 160. Fruit, apples. Best adapted to wheat, corn, potatoes, grain, hay. Wire fences not in very good condition. Nine-room house, condition good to fair. Outbuildings: tool shed, hen house, granary, barn and 2 sheds. House watered by well;

barns by well and springs; fields by springs and creek. Lake Keuka 7 miles distant. Farm now occupied by tenant. Reason for selling, son going to war. Price, $6,600. Terms, $1,000 down. If sold before April 1, 1918, will include fodder, team, 4 cows and tools. Address W. H. Bardeen, Avoca, N. Y.

No. 621.— Farm of 160 acres; located 2 miles from postoffice (R. D. No. 3) and railway station at Avoca, on lines of D., L. & W. and Erie R. Rs.; ½ mile from school; 2 miles from churches; 10 miles from butter factory; 3 miles from cheese factory; 5 miles from milk station. Good highways. Nearest city, Hornell, population 14,352, distant 18 miles, reached by rail and highway. General surface of farm, partly rolling. Nature of soil.yellow loam. Acres used as meadow, 100; in natural pasture, 45; in timber, 15, hemlock, maple and beech. Acres tillable, 140. Two apple orchards of 75 trees each; pears and plums. Best adapted to potatoes, beans, oats, wheat and rye. Wire fences in fair condition. Good house of 10 rooms. Three barns, 36x68, with basement, good condition; 32x42, fair; 18x24, good. House watered by pump; barns by creek; fields by creek and springs. Cohocton River 2 miles distant. Farm now unoccupied. Reason for selling, to settle estate. Price, $5,000. Terms, cash. Address P. J. Beckerman, executor, Avoca, N. Y.

No. 622.— Farm of 60 acres; located 3 miles from postoffice at Avoca, R. D. No. 3; 3 miles from railway stations at Avoca and Wheeler, on lines of D. L. & W., Erie, and K. & P. Rs.; ½ mile from school; 3 miles from churches and cheese factory; 11 miles from milk station. Good highways. Nearest city, Hornell, population 14,352, distant 19 miles, reached by rail and highway. General surface of farm, mostly level. Nature of soil, yellow-loam. All can be used as meadow, but 50 acres now so used; acres in natural pasture, 5. All tillable. Fruit, 50 apple trees, also pears and cherries. Best adapted to potatoes, beans, oats and corn. No fences. House of 7 rooms in fair condition. Barns, 42x52, fair; 32x40, fair. House and barns watered by wells; fields by spring. Cohocton River 3 miles distant. Farm now unoccupied. Reason for selling, to settle estate. Price, $2,000. Terms, cash. Address P. J. Beckerman, executor, Avoca, N. Y.

SUFFOLK COUNTY

Area, 720 square miles. Population, 104,342. Annual precipitation, 60.2 inches. Annual mean temperature, 51.3°. Number of farms, 2,491. County seat, Riverhead.

This comprises the middle and eastern part of Long Island and is the extreme southeastern county of New York State. The waters of Long Island Sound border its north shore with the Atlantic Ocean on its southern side. The coast is deeply indented by inlets and bays, which afford good harbors.

The surface along the south shore is very flat and only about fifty feet above sea level. Extending across the county north and south from Smithtown Bay to Great South Bay, is a level valley averaging about four miles wide. These level tracts all have fertile, sandy loam soil. The northeastern portion rises in gentle slopes to about 300 feet above sea level and the soil is a clay and gravelly loam. From Smithtown Bay east along the north shore, is a ridge of hills extending to the extreme end of the county, while to the south it is parallel with a low broad upland, the soil being gravelly loam. Between these ridges is an intervale of level land, with fertile sandy loam. The surface is extensively covered with forests There is, however, very little commercial timber to be found.

The leading crops are: corn, shelled, 415,541 bushels; oats, 74,069 bushels; wheat, 66,492 bushels; rye, 26,826 bushels; potatoes, 3,110,136 bushels; hay and forage, 45,866 tons. Because of the short distance from this county to New York City, much of the land is planted in garden truck and hundreds of farmers are engaged in this particular kind of farming. Along the south shore are found large duck and poultry farms, several of which market more than 100,000 ducks annually. Cranberries are also very extensively grown. The value of all farm property is $33,537,021, an increase of 41.6 per cent. The average price of improved land is $172.50, showing a gain of $68.15 per acre in ten years. This rise in value is largely caused by its proximity to New York City and by the rapid development of the poultry and vegetable business. Dairy cows reported, 6,918; horses, 10,103; swine, 10,170; sheep, 3,893; poultry, 609,735; production of milk, 2,794,136 gallons, total value of the same being $276,676.

The county contains 129 district schools, has 57 miles of state and county roads and 1,462 miles of other improved highway. It is intersected by the Long Island and South Side railroads and electric lines in the extreme western part. The agricultural organizations comprise 3 granges, the Long Island potato exchange, farmers' agricultural association, a county agricultural society, a farmers' club and the Huntington Horticultural and Agricultural Society.

TOWN OF BROOKHAVEN

Population 19,591

No. 623.— Farm of 14 acres; located ⅛ mile from East Setauket P. O.; ⅜ mile from railway station at Setauket on line of L. I. R. R.; 1-16 mile from school; ⅛ mile from churches; ⅜ mile from milk station. Highways, gravel. Nearest village, Port Jefferson, 1¾ miles distant, reached by rail and highway. Surface of farm, rolling. Soil, loam. Acres in natural pasture, 2; 1 acre asparagus; in timber, 1, locust, hickory, etc. Acres tillable, 10. Fruit, 300 peach trees, apples, pears, etc. Best adapted to truck farming, flowers or poultry. Fences, wire, good. Two houses, 1 of 6 rooms, completely furnished, and 1 of 9 rooms, good condition. Outbuildings: barn, 20x30; poultry house, 15x50; corn crib, etc., all in good condition. Watered by springs; enough for irrigation. This farm is 1½ miles from Long Island Sound; ⅛ mile from Port Jefferson Bay; good bathing. Occupied by owner. Price, $7,500, includes farm implements, horse, wagons, etc. Terms, part cash. Address C. W. Ryder, owner, East Setauket, L. I., N. Y.

TOWN OF ISLIP

Population 17,658

No. 624.— Farm of 70 acres; located 1½ miles from postoffice at Sayville; 1 mile from railway station at Sayville, on line of Long Island R. R.; ½ mile from school and churches. Concrete highways. Nearest village, Sayville, population about 2,600, distant 1½ miles, reached by highway. General surface of farm, level. Altitude, 20 feet. Rich, heavy soil. Acres that can be used as meadow, 40; in timber, 30, pine and oak, fair; acres tillable, 40. Adapted to corn, potatoes and beans. No fences. Two-story frame house in fair condition. Main barn, cow barn, corn crib, hen house, pig house. House and barns watered by pumps. Now occupied by tenant. Price, $20,000. Terms, 40% cash, 60% mortgage. Will rent. Address Daniel D. White, Gilbert Hirsch and Frank H. Geiger, Sayville, N. Y.

TOWN OF SMITHTOWN

Population 4,988

No. 625.— Farm of 250 acres; located 2 miles from Hauppauge P. O.; 3 miles from railway station at Smithtown on line of L. I. R. R.; 2 miles from school and churches. Surface of farm, rolling and level. Soil, gravel loam. Acres in natural pasture, 10; in timber, 180, chestnut, oak, cedar and locust. Acres tillable, 60. Fruit, 3,500 peach trees, also apples, plums, pears, quinces and cherries. Adapted to corn, potatoes, etc. House, 7 large rooms, open fireplace, fair condition. Outbuildings: barn, shed and poultry house. Occupied by tenant. Price, $100 per acre. Terms, reasonable. Address Henry S. Mott, owner, Northport, L. I., N. Y. Will rent.

No. 626.— Farm of 116½ acres; located 1 mile from Kings Park P. O. and ¾ mile from railway station, on line of Long Island R. R.; 1 mile from school and churches. Highways, state road. General surface, rolling. Altitude, 100 feet. Nature of soil, light loam. Acres that can be used as meadow, 40. Some timber, locust, chestnut and oak. Acres tillable, 40. Fruit, apples, pears and cherries. Adapted to all crops. Fences, new. Two houses in good condition. Watered, house by spring and fields by springs. Address Edgar T. Smith, owner, Kings Park, N. Y.

SULLIVAN COUNTY

Area, 911 square miles. Population, 38,189. Annual precipitation, 37.6 inches. Annual mean temperature, 46.3°. Number of farms, 3,851. County seat, Monticello.

This county is located in the southeastern part of the state, is bordered on the south by Pennsylvania, on the west and southwest by the Delaware River, and is drained by the Mongaup, Neversink and Shawangunk Rivers, Beaver Kill, Rondout Creek and two branches of Callicoon Creek.

The surface is hilly with an elevation constantly increasing from 1,000 feet in the southern part to 2,400 feet above tide water in the extreme north of the county. It is extensively covered with forests of ash, beech, birch, maple, chestnut, oak and pine. Red sandstone underlies a large part of the surface and bluestone is largely quarried and shipped for flagging, paving, etc. The soil in the north and central sections is largely of red shale. In the southern half of the county it is more rolling, and clay and gravelly loam well adapted for grain growing are found. As a whole the soil is quite productive and adapted to pasturage and general farming.

The county produced corn, shelled, 59,627 bushels; oats, 191,222 bushels; buckwheat, 38,693 bushels; rye, 22,972 bushels; potatoes, 118,382 bushels; hay and forage, 45,886 tons. Total value of all farm property is $19,628,466, an increase of 57.4 per cent. in ten years. It is to be noted that even with this great gain the buildings in the county are still worth on an average $7 per acre more than the land itself. We know of no other state where the land is still fertile, as it is in this county, in which this condition is found. Domestic animals reported are: dairy cows, 16,190; horses, 6,255; swine, 5,800; sheep, 1,215; poultry, 272,093; production of milk, 8,555,690 gallons, the total value of which was $683,025.

The county is crossed by the N. Y. O. & W. Railroad. A branch of the Erie Railroad extends from Port Jervis to Monticello. In the central part of the county among the highlands are located many excellent sanitariums and the benefit received seems to be equal to that afforded by the Adirondack regions. The climate is not nearly so cold as in the Adirondacks. The water is noted for its purity and clearness. There are 174 district schools in the county and an excellent academy is located at Monticello, with high and graded schools in the villages. The county contains 35 miles of state and county roads and 1,695 of other improved highways. 32 milk stations and factories are conveniently located in the county and its agricultural organizations consist of one county agricultural society, two granges, six Hebrew farmers' associations, a farmers' club and a farm and garden club.

TOWN OF COCHECTON

Population 1,141

No. 627.— Farm of 386 acres; 6 miles from the railroad station at Narrowsburg, on the Erie R. R. Post office, church, general store, school and blacksmith shop, within one block of the house. Acres tillable and in pasture, 200; balance, woodland, second growth white pine, hemlock, birch, beech, maple, about 100,000 feet of lumber, consisting chiefly of pine and hemlock, and about 300 cords of poplar. Fine trout stream running through property. About 300 yards east of house is an artificial lake, formed by a dam built across the Ten Mile River; this lake is well stocked with pickerel and has an area of about 25 acres; dam has heavy wall, 16 feet through, and faced with about 1 foot of concrete; affords good water power. On the west shore of lake is a beautiful pine grove, good hunting ground for small game such as rabbits and partridges. House, 15 rooms, good condition. Outbuildings: barn, 30x60, with concrete basement, stable for horses and cattle; barn, 36x64, used for storing hay and grain; blacksmith shop and work shop, 24x40; wood and coal house, 16x100, with sleeping room above; poultry house, 16x171, with concrete floor. There is a spring on the hillside, with elevation enough to have running water in both house and barn. Reason for selling, death of owner's wife. Price, $10,000. Owner will divide property and sell 344 acres, including barns, stream, lake and woodland, for $6,000. Address R. B. Heinle, owner, Cochecton Center, N. Y.

No. 628.— Farm of 20 acres; located ½ mile from postoffice at Cochecton; ½ mile from railway station at Cochecton, on line of Erie R. R.; ½ mile from school; ¼ mile from churches; 1¼ miles from milk station. Good highways. Nearest city Binghamton, population 53,668, distant 40 miles, reached by Erie R. R. General surface of farm rolling. Altitude, 1,480 feet. Nature of soil, rough. Acres used as meadow, 1; in timber, 15, oak, chestnut and pine. One acre tillable. Adapted to potatoes. Wire fences in fair condition. House of 5 rooms in good condition. No barns. House watered by running water. Delaware river borders the property. Farm now occupied by tenant. Price, $3,000. Terms, ½ cash. Will rent by month or with option to buy. Address Harry Vail, New Milford, N. Y.

TOWN OF DELAWARE

Population 1,915

No. 629.— Farm of 50 acres; 6 miles from Callicoon P. O., R. D.; 1 mile from railway station on line of Erie R. R.; 1 mile from school; 2 miles from churches, butter factory, milk station and cheese factory. Highways, state road. Nearest village, Jeffersonville, population 400, 2 miles distant. Surface, rolling. Soil, good. Acres in meadow, 15; natural pasture, 2; timber, 5. Acres tillable, 40. Fruit, about 80 apple trees, some pear trees, 15 grapevines. Adapted to oats, corn, potatoes, hay, etc. Fences, stone and wire, good condition. House, 31x80, 2½ stories, almost new. Outbuildings: barns, 30x40, 38x40, shed, 20x40, good condition. House and barns watered by wells; fields, by springs. Occupied by owner. Reason for selling, advanced age. Price, $7,000, which includes household furniture and farm implements. Terms, ⅔ cash, balance on mortgage. Address Fred Justin, owner, Callicoon, N. Y., R. D. 1.

TOWN OF HIGHLAND

Population 1,043

No. 630.— Farm of 100 acres; located 1½ miles from Eldred P. O., 5¾ miles from Shohola, Pa., railway station, on line of Erie R. R.; 1½ miles from school and churches. Nearest city, Port Jervis, population 9,413, 18 miles distant, reached by rail or good highway. General surface, level. Altitude, 1,200 feet. Nature of soil, clay loam. Acres in meadow, 40; in timber, 60. Acres tillable, 40. Fruit, 75 apple trees. Best adapted to hay, grain and potatoes. Fences, stone and wire, fair condition. House, 24x32, with outside kitchen. Barn, 30x40, with lean-to, fair condition. House watered by well; barn by well and spring; fields by springs. Occupied by tenant. Price, $2,000. Terms, part cash. Reason for selling, owner in other business. Address, John Love, owner, Eldred, N. Y. Will rent.

TOWN OF MAMAKATING

Population 3,104

No. 631.— Farm of 182 acres; located ½ mile from Phillipsport postoffice and railway station, on line of O. & W. R. R.; ½ mile from church, school and milk station; 7 miles from butter and cheese factories. Good highways. Nearest village, Ellenville, population 3,073, distant 7 miles, reached by rail and highway. General surface of farm, level. Altitude, about 1,000 feet. Rich soil. Acres used as meadow, 25; in timber, 60 or more, chestnut, walnut, maple, spruce, etc. Acres tillable, 80 or more. Fruit, 25 apple trees, etc. Best adapted to corn, buckwheat, rye, potatoes, hay, etc. Wire fences in fair condition. Two-story house of 10 rooms, in good condition. Largest barn about 50x46 feet. House watered by springs; barns by brook through barnyard. Shawangunk Mts. near by. Farm now occupied by caretaker. Reason for selling, to settle estate. Price $6,500. Terms, cash if possible. This would make a fine stock farm, club house farm or summer hotel, being situated in very healthful location. Address K. M. Mackey, exec., 28 Clinton Ave., Ellenville, N. Y.

TOWN OF NEVERSINK

Population 1,861

No. 632.— Farm of 160 acres; 1¼ miles from Grahamville; ¾ miles from school and 1½ miles from churches. Good stock farm, fine location. Plenty of wood, consisting of about 1,000 sugar maple trees and a quantity of oak and chestnut. Sugar bush, equipped with evaporator for making maple sugar. Fine trout stream. House, 44x48, with wing, 24x26, in good repair, well painted. Large barns and all necessary outbuildings, nearly new. Watered by springs and brook. Well fenced. Farm is well provided with machinery, new engine, ensilage elevator, 50-ton silo in barn, thresher and cleaner, wood saw and corn planter. Will be sold with or without machinery. Reason for selling, owner not able to work on farm, having only one hand. Price, $3,000. Terms ½ cash, balance on mortgage. Thomas Barkley, owner, Grahamsville, N. Y.

No. 633.— Farm of 81 acres; located 1 mile from Neversink P. O.; 7 miles from railway station at Liberty on line of O. & W. R. R.; ¾ mile from school: 1 mile from church; 7 miles from butter factory and milk station. Highways, good condition. Nearest large village, Liberty, population 2,395, 7 miles distant, reached by highway. Surface of farm, slightly rolling; soil, red loam. Acres in meadow, 35; in natural pasture, 20; in timber, 26, beech, birch and maple. Acres tillable, 50. Fruit, apples, pears, plums and quinces, about 200 trees. Best adapted to oats, buckwheat and potatoes. Fences, barbed wire. House, 20 rooms, in good condition. Outbuildings: barn, 26x36, good condition; other necessary outbuildings. Watered, house and barns, by springs; fields, by brook. Occupied by owner. Reason for selling, advanced age. Price $3,000. Terms, half down, balance on long time. Address Henry W. Dean, owner, Neversink, N. Y.

TOWN OF ROCKLAND

Population 3,803

No. 634.— Farm of 3 acres; located 4½ miles from Livingston Manor P. O. and railway station on line N. Y., O. & W. R. R.; 1 mile from school; 1¼ miles from church. Highways, good. Surface of farm, nearly level. Altitude, 1,800 feet. Acres that can be used as meadow, 2½. Fruit, 6 apple and 5 plum trees. Best adapted to hay and vegetables. Fences, wire, in good condition. House, 12 rooms, in good condition. Outbuildings: small barn, poultry house, wood house and laundry. House watered by artesian well. Lake Waneta on border of farm. Occupied by owner. Reason for selling, ill health. Price and terms on application. Address Mrs. M. Gilmour, owner, Livingston Manor, N. Y.

No. 635.— Farm of 218½ acres; located 1¼ miles from Roscoe postoffice; 1¼ miles from railway station at Roscoe, on line of N. Y., O. & W. R. R.; 1¼ miles from school, churches and milk station. Private road to farm, hilly but good. Nearest village, Roscoe, population about 1,400, distant 1¼ miles, reached by highway. General surface of farm, level. Altitude, 1,600 feet. Nature of soil, red clay loam, good. Acres that can be used as meadow, 50; number now so used, 30; in natural pasture, 50; in timber, 138½, maple, birch, beech, young; acres tillable, 80. Eighty apple and 5 pear trees. Adapted to potatoes, oats, rye and hay. Barbed and woven wire fences in good condition. Large house in good repair. Overshot barn will accommodate 22 cows; poultry houses; hog houses, etc. House and barns watered by wells. Beaver Kill 1 mile distant. Farm now occupied by owner. Reason for selling, other business. Price, $3,000. Terms, cash. Farm has sugar orchard of 300 trees. Address George E. Beattie, Roscoe, N. Y.

No. 636.— Farm of 150 acres; located 3 miles from Roscoe postoffice, R. D. No. 1; 3 miles from railway station at Roscoe, on line of N. Y., O. & W. R. R.; 3 miles from school, churches and milk station. Highways, hilly but good. Nearest village, Roscoe, population about 1,400, distant 3 miles, reached by highway. General surface of farm, rolling. Altitude, 1,450 feet. Nature of soil, red clay. Acres that can be used as meadow, 60; in natural pasture, 40; in timber, 50; maple, beech, birch. Acres tillable, 100. Fifty apple and 5 pear trees. Adapted to potatoes, oats, rye and hay. Stone and woven wire fences in good condition. Large 10-room house in good condition. Barn, 40x60; silo; wagon house; pig house; poultry house; etc. House and barns watered by springs; fields by brook. Amber Lake ¾ mile distant and Willowemoc River 2 miles. Farm now occupied by owner. Reason for selling, owner retiring. Price, $8,000. Terms, part cash, balance mortgage at 6%. Price includes 14 cows, 6 heifers, team and farm implements. Address R. Ronalder, owner, Roscoe, N. Y., R. D.

No. 637.— Farm of 100 acres; located 3½ miles from postoffice at Livingston Manor, R. D. No. 1; 3½ miles from railway station at Livingston Manor, on line of N. Y. O. & W. R. R.; 1½ miles from school; 1 mile from churches; 3½ miles from milk station. Highways, hilly but fair. Nearest village, Livingston Manor, population about 1,300, distant 3½ miles, reached by highway. General surface of farm, rolling. Altitude, 1,650 feet. Nature of soil, red clay. Acres that can be used as meadow, 60; acres now used as meadow, 50; in natural pasture, 30; in timber, 20; maple, beech and birch. Acres tillable, 60. Thirty apple and 3 pear trees. Adapted to potatoes, oats, rye and hay. Wire fences in fair condition. House of 10 rooms, in good condition. Large barn and silo; pig house; chicken house, etc. House watered by well; barns by spring; fields by brooks. Shandelee Lake 1 mile distant. Farm now occupied by owner. Reason for selling, owner wants larger farm. Price, $7,000. Terms, ½ cash, balance mortgage at 6%. Price includes 30 head of cattle, team and implements. Address Joseph Tempel, Livingston Manor, N. Y., R. D. 1.

No. 638.— Farm of 127 acres; located 2 miles from Roscoe P. O., R. D. and railway station, on line of O. & W. R.

R.; ⅛ mile from school; 2 miles from churches, butter factory, cheese factory, milk station and condensing plant. Highways, good. General surface, level. Altitude, 1,800 feet. Nature of soil, sandy. Acres in meadow, 40; in natural pasture, 60; in timber, 27, hardwood. Acres tillable, 25. Fruit, 216 apple and 4 pear trees. Best adapted to hay, oats, wheat, etc. Fences, barbed wire, good condition. House, 86x28x36, good condition. Outbuildings: barn, milk house, ice house, cottage, sap house, poultry house, good condition. Watered: house piped from spring; fields, by trout stream. Reason for selling, poor health. Price, $10,500. Terms, $7,000 cash, balance on mortgage. This place has been used as boarding house, accommodating 100 people. Address Frederic A. Swick, owner, Roscoe, N. Y.

TIOGA COUNTY

Area, 498 square miles. Population, 25,549. Annual precipitation, 47.11 inches. Annual mean temperature, 49.3°. Number of farms, 2,844. County seat, Owego.

This county is one of the southern tier of counties, in about the center of the state and borders on Pennsylvania. It is intersected by the Susquehanna River. It is also drained by the Owego, Tatatonk and Pipe Creeks.

The surface is featured by broad, verdant hills and valleys, some of which are quite deep. Woodlands of ash, beech, elm, hickory, oak and sugar maple and other trees cover nearly one-third of the county. The soil of the valleys is largely a deep gravelly loam, rich and fertile; that of the hills, in the western section is a clay and gravelly loam. In the north, black loam is much in evidence, while south of the Susquehanna River, shale and clay loam predominates. The soil is well adapted to general farming and pasturage. The leading crops are: corn, shelled, 25,167 bushels; oats, 410,357 bushels; wheat, 18,847 bushels; buckwheat, 124,742 bushels; rye, 13,992 bushels; potatoes, 165,069 bushels; hay and forage, 53,742 tons. The value of all farm property is $11,085,589, a gain of 12.6 per cent. in ten years. The average price of farm lands is $14.29 per acre, but the average price of improved land is $27.78. The total production of milk is 9,595,120 gallons; total receipts from the sale of dairy products, $841,126.

The county is intersected by the Erie Railroad, D. L. & W. main line and branch running north from Owego, and by three branches of the Lehigh Valley Railroad. The local markets which may be found in Owego, Elmira, Ithaca and Binghamton are ample for all the products of the county and lie within a very short shipping distance. Buffalo, New York and Philadelphia furnish unlimited markets for those who wish to avail themselves of them.

There are 148 district schools in the county, several standard high schools and a free public academy located at Owego. There is a total of 1,067 miles of highway in the county, only 83 of which are not improved. The organizations established to conserve agricultural interests consist of a Pomona grange and two subordinate granges, two agricultural societies and two poultry associations.

TOWN OF BARTON

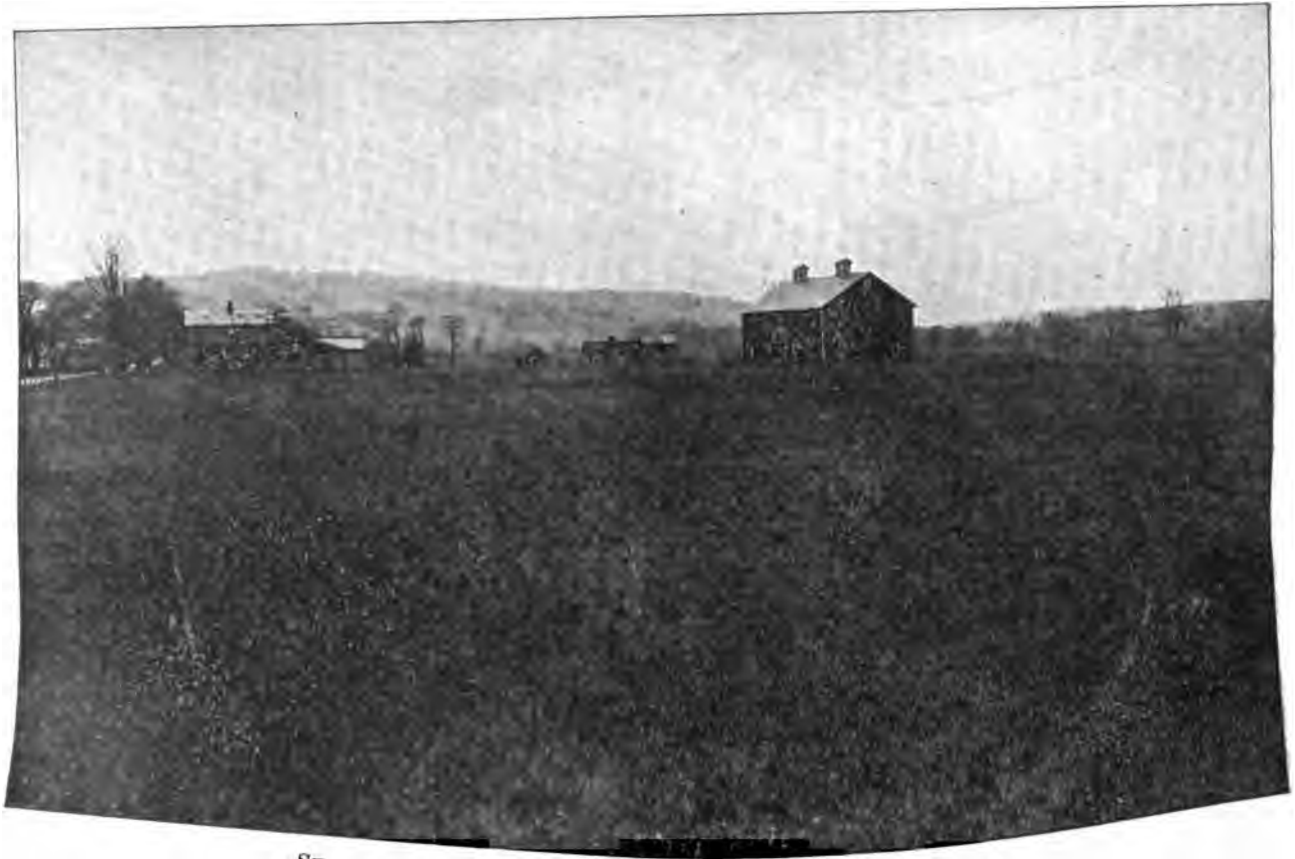
Population 6,682

No. 639.— Farm of 110 acres; located ¾ mile from Waverly P. O., R. D. 1, and railway station, on line of D. L. & W., Erie, and Lehigh Valley R. Rs.; ½ mile from school and churches; ¾ mile from butter factory and milk station. Highways, hilly but good. Nearest large village, Waverly, population, 5,119, ¾ mile distant, reached by highway. Surface rolling. Soil, clay subsoil. Acres in meadow, 42; in natural pasture, 25; in timber, 12, pine, oak, etc. Acres tillable, 98. Fruit, 5 apple, 8 cherry, 7 plum, 6 pear and 2 peach trees. Adapted to corn, oats, potatoes, buckwheat, wheat, etc. Fences, barbed wire, in good condition. House, brick, 10 rooms, in good condition. Outbuildings: horse barn, 28x32, in good condition; shed, 32 feet long; barn, 30x40, in fair condition; wagon house, 16x32; woodshed, poultry house, in good condition. Watered, house, by spring and well; barns, by spring; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, $6,000. Terms, $3,000 cash, balance on time. Address J. E. Walker, owner, Waverly, N. Y., R. D. 1. Will rent.

TOWN OF CANDOR

Population 2,896

No. 640.— Farm of 70 acres; located 4 miles from Newark Valley P. O.; 3



Showing the "Lay of the Land" in Eastern New York.

miles from Flemingville, on line of L. V. R. R.; ½ mile from school and churches; 4 miles from cheese factory and condensing plant; 3 miles from milk station. Highways, some level and some hilly. Nearest village, Owego, population 4,570, 8 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 50; in natural pasture, 6; in timber, 12, beech, chestnut, oak, ash and maple. Fruit, apple and a few young peach trees. Adapted to oats, hay, buckwheat, rye, wheat, potatoes and corn. Fences, wire, rail and stone, in fair condition. House, 12 rooms. Outbuildings: barn 30x40 with shed 20x40, stable, silo, wagon house 30x40 with stable for horses, also poultry house and hog house. Watered, house by well; barns, by well and creek; fields, by spring and creek. Occupied by owner. Reason for selling, advanced age. Price, $4,500. Terms, ½ cash and remainder to suit purchaser. Address, Dana H. Andrews, owner, Newark Valley, N. Y.

No. 641.— Farm of 138 acres; located 6 miles from Candor P. O., R. D. No. 1; 2 miles from railway station at West Candor, on line of Lehigh Valley R. R.; ½ mile from school; 2 miles from churches and milk station and 6 miles from condensing plant. Highways, good. Nearest village, Owego, population 4,570, reached by rail or highway. General surface, level and rolling. Altitude, 800 feet. Nature of soil, loam with some stones. Acres that can be used as meadow, 100; in natural pasture, 25; in timber, 10, mostly hardwood. Acres tillable, nearly all. Fruit, apples, pears and cherries. Adapted to hay, potatoes, oats, rye, buckwheat, etc. Fences, woven wire and some barbed wire, good condition. Ten-room house, upright, 18x24, wing, 16x32; new roof, good condition. Outbuildings: barns, 30x44, with basement; 30x42, with basement; and 20x30, with basement; new silo, 12x22. Watered, house by well and cistern; barns, by springs; and fields by spring. Occupied by tenant. Reason for selling, old age. Price $23 per acre. Terms, $1,500 cash, balance on mortgage. Address, La Fayette Crum, owner, 212 Linden Ave., Ithaca, N. Y.

No. 642.— Farm of 52 acres; located 5 miles from Candor P. O., R. D. No. 3; 2½ miles from railway station at Catatonk, on line of D. & H. R. R.; ⅝ mile from school; ⅝ mile from church; 5 miles from butter factory and 2 miles from milk station. Highways, sloping, good. Nearest village, Owego, population 4,570, 5½ miles distant, reached by rail or highway. General surface, rolling, with some level fields. Nature of soil, clay loam. Acres that can be used as meadow, 47; now used as meadow, 13; in natural pasture, 10; in timber, 5, pine, oak, chestnut, good. Acres tillable, 47. Fruit, 17 apple, 14 plum, 40 peach, 7 cherry, 3 pear trees, all bearing. Adapted to corn, potatoes, oats, wheat, rye and hay. Fences, wire, rail and stone wall, fair condition. House, 30x28, 7 rooms, with 16x20 store room and wood shed, fair condition. Outbuildings: barn 30x40, with basement; wagon barn, 28x20; granary, 16x12; 3 poultry houses, fair condition. Watered, house, by well; barns, by well; and fields, by springs. Occupied by owner. Reason for selling, old age and ill health. Price $1,800. Terms, ½ cash, balance on mortgage. Address D. D. Burchard, owner, Candor, N. Y., R. D. 3.

No. 643.— Farm of 44 acres; located 1¼ miles from Candor P. O, on line of D., L. & W. R. R.; ⅛ mile from school; 1½ miles from churches and milk station. Nature of highways, dirt road. Nearest village, Owego, population 4,570, 10 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam. Acres used as meadow, 29; in natural pasture, 5; in timber, 10, oak, beech, maple and chestnut Acres tillable, 32. Fruit, 25 apple, 11 cherry, 1 pear, 4 plum trees, 2 grape vines and currants. Adapted to corn, oats, buckwheat, potatoes, rye, hay and beans. Fences, rail and woven wire, in fair condition. House, 20x36, woodshed 11x23, in fair condition, barn 28x32, new poultry house 12x30. Watered, house by well; barns, by springs; and fields, by springs and creek. Reason for selling, other business. Price, $1,000. Terms, $400 cash and remainder on mortgage at 5%. Address Clarence E. Wright, owner, Candor, N. Y.

No. 644.— Farm of 97 acres; located 5½ miles from Candor P. O., R. D. No. 3; 3 miles from railway station at Catatonk, on line of D., L. & W. R. R.; less than 25 rods from school and church; 6 miles from butter factory and 2½ miles from milk station. Highways, good. Nearest village, Owego, population 4,570, 6 miles distant, reached by rail and highway. General surface, rolling, with some level fields. Nature of soil, clay loam. Acres that can be used as meadow, 93; now used as meadow, 45; in natural pasture 15; in timber, 4, pine, oak and chestnut, good. Acres tillable, 93. Fruit, 20 apple, 4 cherry trees and currants. Adapted to corn, potatoes, oats, wheat, rye and hay. Fences, mostly wire, some rail. House, 30x30, good, well roofed. Outbuildings: barn, 30x40, large shed, 16x20, with loft, fair condition, all well roofed. Watered, house by well; barns, by springs; and fields, by springs and brook. Reason for selling, old age. Price, $2,800. Terms, ½ cash, balance on mortgage. Address Celestia A. Burchard, owner, Candor, N. Y., R. D. 3.

No. 645.— Farm of 93 acres; located 2½ miles from Straits Corners P. O., R. D. 1; 3 miles from railway station at West Candor, on line of Lehigh Valley R. R.; 1 mile from school and churches, butter factory and milk station; 7 miles from condensing plant. Highways, good. Nearest large village, Owego, population 4,570, 10 miles distant, reached by rail and highway. Surface of farm, half level, balance rolling and some side hill. Soil, 20 acres gravel, balance loam. Acres in meadow, 25; in natural pasture 25; in timber, 15, hemlock, cherry, ash, beech, etc. Acres tillable, 70. Fruit, 50 apple, 1 pear, 3 peach, 1 crab apple, 1 plum and 4 cherry trees. Adapted to buckwheat, oats, corn, potatoes, wheat and hay. Fences, mostly wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: basement barn 36x56; shed attached, 20x40; wagon house attached, 26x35; poultry house, tool house and hog house. Watered, house, by running water; barns, by running water; fields, by creek and springs. Occupied by tenant. Reason for selling, other business. Price, $2,200. Terms, $1,000 down, balance on bond and mortgage at 5%, easy payments. Address Walter E. Elmendorf, owner, Candor, N. Y.

No. 646.— Farm of 117 acres; located 1 mile from postoffice at Candor, R. D. No. 3; 1 mile from railway station at Candor on line of D., L. & W. R. R.; 1 mile from school, milk station and condensing plant; ½ mile from churches; 4 miles from cheese factory. Nearest city, Ithaca, population 16,750, distant 20 miles, reached by railway. General surface of farm, level. Nature of soil, gravel. Acres that can be used as meadow, 75; number now used as meadow, 40; in natural pasture, 25; in timber, 4, chestnut and hardwood; acres tillable, 90. Fruit, 12 apple trees, 7 grape-vines, 2 plum trees, 6 cherry trees. Adapted to corn, wheat, oats, buckwheat, rye. Board and wire fences in fair condition. House of 10 rooms in good condition. Two barns; 1 hog pen; corn crib; 2 hen houses, all in good condition. House and barns watered by pumps; fields by springs. Farm now occupied by owner. Price, $8,000. Terms cash. Address Mrs. Alias Sites Thietge, Candor, N. Y.

No. 647.— Farm of 98 acres; located 2½ miles from Candor postoffice, R. D. No. 2; 2½ miles from railway station at Candor, on line of D., L. & W. R. R.; ¾ mile from school; 2½ miles from churches and milk station; 3 miles from cheese factory; 17 miles from condensing plant. Good highways. Nearest village, Owego, population 4,570, distant 12 miles, reached by rail and highway. General surface of farm, level. Nature of soil, loam and gravel. Acres that can be used as meadow, 70; number now used as meadow, 40; in natural pasture, 30; in timber, 28, hemlock, chestnut, oak, pine; acres tillable, 70. Forty-five apple trees. Best adapted to oats, buckwheat, corn and potatoes. Wire and rail fences. New 8-room house. Barns, 30x40; 28x40; hog house, 12x24, all good. House watered by well; barns and fields by springs. Farm now occupied by owner. Reason for selling, owner unable to work. Price, $4,400. Terms, part cash, balance mortgage. Will rent for cash with option to buy. Price includes stock and tools; will give possession at once. Address L. S. Starkweather, Candor, N. Y., R. D. 2.

No. 648.— Farm of 151 acres; located 3 miles from postoffice at Candor, R. D. No. 1; 1 mile from railway station at West Candor, on line of Lehigh R. R.; 1 mile from school; 3 miles from churches; 1 mile from creamery; 5 miles from cheese factory; 1 and 4 miles from milk stations. Good highways. Nearest city, Ithaca, population 16,750, distant 20 miles, reached by rail and highway. General surface of farm, part hill and part level. Nature of soil, mostly gravelly loam. Acres that can be used as meadow, 60; number now so used, 50; in natural pasture, 10; in timber, 81, pine, hemlock, beech, maple,—good. Acres tillable, 70. Apple trees 37, of several varieties. Adapted to corn, oats, wheat, potatoes, timothy, etc. Partly wire, pole, rail and stump fences, fairly good. House with 13 rooms and large cellar, in good condition. Barns, 30x40; 40x70; hen house, 16x24; corn house and hog pen attached; 6-room tenant house; silo. House and barns watered by wells; fields by well and creek. Farm at present unoccupied. Possession can be given on short notice. Price, $3,500. Terms, half down, balance time. Address Mrs. J. H. Munroe, Candor, N. Y.

No. 649.— Farm of 98 acres; located 5 miles from postoffice at Candor, R. D. No. 2; 5 miles from railway station at Candor, on line of D. L. & W. R. R.; ¼ mile from school and churches; 1½ miles from cheese factory; 5 miles from milk station. Good highways, slightly hilly. Nearest village Owego, population 4,570, distant 12 miles. General surface of farm, rolling, some level, no hilly land. Nature of soil, loam; clay subsoil. Acres that can be used as meadow, 50; acres now used as meadow, 30; in natural pasture, 25; in timber, 16, oak, pine, chestnut, beech, birch, maple; acres tillable, 80. Fruit, apples, pears, plums, cherries. Adapted to all kinds of grain, but is a dairy farm. Wire and rail fences in fair condition. Nine-room house, painted white, in good condition. Barns, 30x40; 26x36; 24x44; stable, 18x52, all connected. House watered by well; barns by well and spring; fields by springs. Farm now occupied by tenant. Can give possession at any time. Reason for selling, owner has another farm. Price, $2,700. Terms, half cash. Would rent to man with stock, or with option to buy. There is sufficient timber on farm to make a good payment. Address E. W. Knapp, owner, Candor, N. Y.

No. 650.— Farm of 130 acres; located 2½ miles from Candor postoffice, R. D. No. 1; 2½ miles from railway station at Candor on line of D. L. & W. R. R.; 1 mile from school; 2 miles from church; 5 miles from cheese factory; 2½ miles from milk station; 8 miles from condensing plant. Good highways, partly state road. Nearest village, Owego, population 4,570, distant 11 miles, reached by rail and highway. General surface of farm, level and rolling. Altitude, 700 feet. Nature of soil, clay loam. Acres that can be used as meadow, 115; acres now used as meadow, 35; in natural pasture, 6; in timber, 12; young pine, chestnut, red oak, etc. Acres tillable, 118. Fruit, 60 apple, 25 cherry, 5 pear, 4 plum trees; also strawberries and currants. Adapted to buckwheat, oats, rye, potatoes, corn. Woven wire and rail fences in good condition. Ten-room house in good condition. Barn, 40x60; ell, 30x40; wagon shed, 14x40; hen houses, fair to good. House watered by 2 pumps; barns by spring and tank; fields by springs. Spencer lake 8 miles distant; Susquehanna river 11 miles. Farm now occupied by tenant. Reason for selling, owner is widow and unable to manage farm. Price, $4,500. Terms, at least ⅓ cash. Running spring water can be easily installed in house. Address Mrs. Anna Betikofer, Box 223, Candor, N. Y.

No. 651.— Farm of 10 acres; located ⅛ mile from Candor postoffice and railway station, on line of D. L. & W. R. R.; ⅛ mile from school; few rods from churches; 3 miles from cheese factory; few rods from milk station. Highways, state roads. Nearest village, Owego, population 4,570, distant 10 miles, reached by state road and railway. General surface of farm, nearly level. Nature of soil, sandy and loamy. Acres that can be used as meadow, 10; acres now so used, 4; less than 2 in natural pasture; number tillable, 10. Fruit trees, 1 apple, 1 pear and 1 grape-vine; raspberry plot. Adapted to any crop for climate. Poultry wire inclosing less than 2 acres; also line fence of wire. Eight-room house in good condition, bath, spacious cellar. Barn and shop; hen house, 12x24. House watered by city water; barns and fields by well. Catatonk creek running through village, expanisons forming ponds. Now occupied by tenant. Price, $2,700. Terms small cash payment, property security for balance. Will rent for cash, or with option to buy. This is a good poultry and truck farm. Address Mrs. Lucy A. Boyd, Candor, N. Y.

No. 652.— Farm of 176 acres; located 4½ miles from postoffice at Candor, R. D. No. 2; 4½ miles from railway station at Candor, on line of D. L. & W. R. R.; ½ mile from school and churches; 2

miles from cheese factory; 4½ miles from milk station. Highways, dirt road. Nearest city, Ithaca, population 16,750, distant 14 miles, reached by rail and highway. About 40 acres creek flat, the rest side hill, not steep. Nature of soil, good clay loam, clay subsoil. Acres that can be used as meadow, 110; number now so used, 67; in natural pasture, 40 or more; in timber, 30, second growth hemlock, and mixed timber acres tillable, 110. Fruit trees, 40 apple, 15 pear, 12 cherry, 2 peach, 6 plum, 7 grape-vines and some currants. Adapted to hay, oats, barley, buckwheat, corn, beans and potatoes. Wire and some rail fences, in good condition. House of 10 rooms, in good condition. Barn, 40x56, 18-foot posts, hip roof, 10-foot basement; barn sided with good pine siding; tool shed; hog and hen house; sap house. House watered by wells; barns by spring; fields by creek and springs. Farm now occupied by owner. Reason for selling, owner has smaller farm. Price, $3,200. Terms $1,200 cash, balance cash or mortgage. Owner has kept 20 to 30 head of cattle and 3 to 5 horses on farm for the last 20 years. Will include one Champion evaporator, and five grade Holstein heifers if sold immediately. Address H. A. Howard, owner, Candor, N. Y.

TOWN OF NEWARK VALLEY

Population 1,975

No. 653.— Farm of 100 acres; located 3 miles from Newark Valley P. O., R. D. 2; 3 miles from railway station at Flemingville on line of L. V. R. R.; ½ mile from school, churches, butter factory and milk station. Highways, good. Nearest large village, Owego, population 4,570, 8 miles distant, reached by highway. Surface of farm, 40 acres hilly, 60 acres rolling and level. Soil, clay. Acres in meadow, 60; in natural pasture, 25; in timber, 2, small oak, pine and hemlock. Acres tillable, 80. Fruit, apples, pears, plums and cherries, also 4 grapevines. Best adapted to potatoes, buckwheat, corn and oats. Fences, about ½ woven wire, balance board, good condition. House, 40x60, 9 rooms, good condition. Outbuildings: horse barn, 30x60; barn, 36x40; cow barn, 36x60; sheep shed, 16x20; tool shed, 20x40; poultry house, 12x20, and ice house, 10x10. All buildings newly painted. Watered, house by running water; barn by pump; fields by springs. Occupied by owner. Reason for selling, other business. Price, $3,800, includes stock and all tools. Terms, $1,800 cash, balance on mortgage. Address A. F. Barrott, owner, 574 Main street, Owego, N. Y.

No. 654.— Farm of 135 acres; located 3 miles from Newark Valley P. O., R. D. No. 1 and railway station, on line of Lehigh Valley R. R.; 1 mile from school and churches and 3 miles from butter factory, milk station and condensing plant. Highways, good. Nearest city, Binghamton, population 53,668, 15 miles distant, reached by rail or highway. General surface, good. Nature of soil, clay subsoil. Acres that can be used as meadow, 75; now used as meadow, 40; in natural pasture, 25; in timber, 15, hard wood. Acres tillable, 100. Fruit, 50 grafted apple trees and 30 cherry trees. Adapted to hay, oats, buckwheat, potatoes and corn. Fences, wire, good condition. House, 11 rooms, good. 2 barns, 36x40, good condition. Watered, house and barns by spring. Occupied by owner. Reason for selling, old age. Price, $30 per acre. Terms, ½ cash, balance on mortgage. Address Manier Zimmer, owner, Newark Valley, N. Y.

No. 655.— Farm of 104 acres; located 2½ miles from Berkshire P. O., R. D. 3; 3 miles from railway station at Newark Valley, on line of Lehigh Valley R. R.; 3 miles from high school; ½ mile from school; 2½ miles from churches, and two condensing plants. Highways, state road. General surface, level and rolling. Altitude, 900 feet. Nature of soil, loam. Acres in meadow, 60; in natural pasture, 34; in timber, 10, chestnut, ash, beech and maple. Acres tillable, 60. Fruit, 10 apple and 10 pear trees, young strawberries and bush berries for home use. Adapted to potatoes, corn and general farm products. Fences, wire, in fine condition. House, large, 11 rooms, besides closets and halls; heated by furnace. Outbuildings: barn 30x40, with stable 26x45 attached; horse barn 26x40, with addition 12x40; granary 16x24, and garage 12x20. House and barns watered by well; fields, by spring and creek. East branch of Owego creek runs through farm. Occupied by tenant. Reason for selling, owner wants smaller farm. Would take small farm or village home in part payment. Price, $60 per acre. Terms, half cash, balance to suit purchaser. Address W. N. Rice, owner, Newark Valley, N. Y.

TOWN OF OWEGO

Population 7,466

No. 656.— Farm of 200 acres; located 6 miles from Owego P. O., R. D. 1 and railway station on line of Erie and D., L. & W. R. Rs.; 4 miles from Newark Valley station on line of Lehigh Valley R. R.; ½ mile from school and church; 4 miles from butter factory; and 3 miles from condensing plant. Highway, state road. General surface, rolling, some level. Nature of soil, mostly loam and shale. Acres in meadow, about 100; in natural pasture, 20; in timber, 20, pine, chestnut, hemlock and hardwood. Acres tillable, 150 or more. Fruit, apples, pears, plums, peaches and cherries. Adapted to hay, oats, corn, buckwheat, potatoes and rye. Fences, wire, in good condition. House, 11 rooms, in good condition. Outbuildings: barn, 50x78, shed, 30x80, all in good condition. House and barns watered by well; fields, by spring. Occupied by tenant. Reason for selling, ill health. Price, $7,000. Terms, $3,000 cash and remainder on easy terms. Address Philip H. Schoolcraft, owner, 399 Main street, Owego, N. Y.

No. 657.— Farm of 60 acres; located 2 miles from Apalachin P. O. and railway station on line of D. L. & W. R. R.; ½ mile from school; 2 miles from churches and milk station and 4 miles from butter factory. Highways, good. Nearest large village, Owego, population 4,570, 8 miles distant, reached by rail and highway. Surface of farm, practically level. Soil, sandy loam. Acres in meadow, 55; in timber, 5, pine, hemlock and beech. Acres tillable, 55. Fruit, apples, cherries and grapes. Adapted to corn, potatoes, oats, wheat and rye. Fences, principally American wire. House, 10 rooms, newly painted, good condition, slate roof, concrete walks. Outbuildings: barn, 80x28; barn, 26x30; grain house, wagon house, storehouse, etc. Watered by well and springs. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, $3,000 down, balance on time. Address George J. Sherwood, owner, Apalachin, N. Y.

No. 658.— Farm of 45 acres; 1 mile south of Apalachin P. O. and railway station on line of D., L. & W. R. R.; ½ mile from school; 1 mile from churches and milk station; 2 miles from butter and cheese factory. Highways, state road. Nearest large village, Owego, population 4,570, 6 miles distant, reached by rail and highway. Surface, level and rolling. Soil, clay loam. Acres in meadow, 43; natural pasture, 1; timber, 1, oak and chestnut. Acres tillable, 43. Fruit, 100 apple trees, 50 sour and sweet cherry trees, pears, plums, peaches and grapes. Adapted to fruits, potatoes and other crops, but especially fruits. Fences, woven wire and rail. House, 16x24, with a 16x20 addition, good cellar, first-class condition. Outbuildings: barn, 28x38; barn, 16x28; barn, 20x30, with basements, in good condition; barns have new roofs; also new carpenter and blacksmith shops. Watered, house and barns by well; fields, by springs. Forest Lake 20 rods from back end of farm. Occupied by owner. Reason for selling, ill health of owner. Price, $2,500. Terms, $1,000 cash, balance on time. Address Wm. W. Jewett, owner, Apalachin, N. Y.

No. 659.— Farm of 66 acres; located 2 miles from Owego P. O., R. D. No. 2 and railway station, on line of Erie, D. L. & W. and Lehigh Valley R. Rs.; 1 mile from school; 2 miles from churches and 2 miles from milk station. Highways, good. Nearest village, Owego, population 4,570, 2 miles distant, reached by rail and highway. General surface, rolling and level. Nature of soil, sandy loam. Acres that can be used as meadow, 60; now used as meadow, 20; in natural pasture, 12. Acres tillable, 60. Fruit, 30 apple, 6 peach, 10 pear, 10 cherry, 6 plum trees, 6 grape vines, ¼ acre of strawberries and red raspberries. Adapted to potatoes, corn, oats, wheat and hay. Fences, mostly wire, good. 7 room house, good, fine cellar and furnace. Outbuildings: barn, 24x34; barn, 30x40; barn, 14x50; new poultry house; good granary, 18x24. Watered, house by well and cistern; barns, by well; fields, by spring. Susquehanna river, 20 rods distant, fine bathing and fishing. Occupied by owner. Reason for selling, ill health. Price, $5,500. Terms, ½ cash, balance on mortgage. Address M. V. Zimmer, owner, Owego, N. Y., R. D. No. 2.

TOWN OF RICHFORD

Population 913

No. 660.— Farm of 132 acres; located 1 mile from postoffice and railway station at Richford, on line of Lehigh Valley R. R.; 1 mile from school, churches, milk station and grist mill. Nature of highways, level, ½ state road, rest good. Nearest village, Owego, population 4,570, distant 20 miles, reached by rail and highway. General surface of farm, rolling, some hilly. Nature of soil, gravelly loam. Acres that can be used as meadow, 100; number now used as meadow, 40; balance in natural pasture; in timber, 30 acres small hardwood. Acres tillable, 100 if cleared. Adapted to potatoes, corn, grains and grasses. All fenced and cross fenced, condition fair. House, 8 rooms, condition fair. Barn, 3 stories, basement, 34x60, with 2-story ell, 24x30; 2 silos; hen houses, etc., in good repair. House and barns watered by running water piped from springs; fields by creek and springs. Now occupied by tenant. Tenant will give possession at any time if sold. Reason for selling owner moved to Virginia for health. Price, $2,200. Terms, ¼ down, balance in four yearly payments with interest at 6%. Will rent with option to buy. This farm will keep 25 to 30 head of cattle. Address C. R. Finch, owner, Clover, Va.

No. 661.— Farm of 154 acres; located 2 miles from Richford postoffice and railway station on line of Lehigh Valley R. R.; ½ mile from school and churches; 2 miles from milk station. Good highways. Nearest village, Owego, population 4,570, distant 20 miles, reached by rail and highway. General surface of farm, level and rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 10; in timber, 144, small hardwood. All tillable when cleared. Adapted to corn, potatoes, grains and grasses. Unfinished house built about 20 years ago, four or five rooms. Fields watered by several springs. Farm now unoccupied. Reason for selling, owner moved to Virginia for health. Price, $8 an acre. Terms, one-fourth down, balance four equal yearly payments with interest at 6%. Large timber cut 30 years ago; enough wood to pay for place. Address C. R. Finch, owner, Clover, Va.

No. 662.— Farm of 75 acres; located 4 miles from Richford postoffice and railway station, on line of Lehigh Valley R. R.; 1 mile from school; 4 miles from churches, milk station and condensing plant. Good highways. Nearest village, Owego, population 4,570, distant 20 miles, reached by rail and highway. General surface of farm, level and rolling. Acres used as meadow 10; in timber, about 65, small hardwood. All land tillable when cleared. Adapted to corn, potatoes, oats and grasses. About 50 acres fenced in woven wire fencing. Fields watered by springs. Farm now unoccupied. Reason for selling, owner moved to Virginia for health. Price, $6 per acre. Terms one-fourth down, balance in four equal payments, yearly, with interest at 6%. The large timber cut off about 30 years ago; nothing cut since. Address C. R. Finch, owner, Clover, Va.

TOWN OF SPENCER

Population 1,205

No. 663.— Farm of 80 acres; located 4 miles from Spencer P. O., R. D. No. 2 and railway station, on line of L. V. R. R.; ¼ mile from school; 3 and 4 miles from churches; 4 miles from butter factory and milk station and condensing plant. Highways, state road. Surface of farm, hilly, rolling and level. Soil, loam. Acres that can be used as meadow, 20 or more; in natural pasture, 25; in timber, 5, hardwood and some hemlock. Acres tillable, 70. Fruit, apples, pears, cherries and plums. Adapted to oats, buckwheat, corn, rye, potatoes, etc. Fences, rail and board. House, 10 rooms, in good condition. Outbuildings: wagon barn, 24x30; hay barn, 30x40; barn, 32x40; store house, pig pen, cowstable 16x30, in good condition. House, watered by well; barns, by creek; and fields by spring and creek. Occupied by owner. Reason for selling, to settle estate. Price, $2,200. Terms cash. Address Olive Ferris, owner, Halsey Valley, N. Y.

No. 664.— Farm of 824 acres; located 3 miles from Spencer P. O., R. D., and railway station on line of L. V. R. R.; ¼ mile from school; 3 miles from churches, milk station and condensing plant. Highways, good, part hilly. Surface of farm, part hilly, part level. Soil, silt loam. Acres in meadow, 300; in natural pasture, 100; in timber, 400, second growth hemlock, chestnut, maple, some large basswood and ash. Acres tillable, 400. Fruit, apples, cherries and peaches. Adapted to oats, buckwheat, potatoes, etc. Fences, wire and board; wire fences in good condition. House, 30x30, fair condition. Outbuildings: 40x60, with addition, 30x40; barn, 30x30, in good condition. Watered: house by well, barns by spring, fields by springs and creek. Reason for selling, other business. Price, $10,000. Terms, $2,000 to $4,000 cash, balance on mortgage. Address the S. Alfred Seely Co., owners, Spencer, N. Y. Will rent with option to buy.

No. 665.— Farm of 80½ acres; located 1 mile from Halsey Valley P. O., R. D. No. 2 and railway station at West Candor on line of Lehigh Valley R. R.; 1 mile from school, butter factory and churches; 5 miles from milk station; 7 miles from condensing plant. Highways, good, some hilly. Nearest large village, Owego, population, 4,570, 12 miles distant, reached by highway. Surface of farm, rolling. Soil, loam. Acres in meadow, 30; in timber, 15, beech, birch and maple. Acres tillable, 65. Fruit, 25 apple trees and some cherries. Adapted to nearly all kinds of crops. Fences, wire, in good condition. House, 11 rooms, in good condition. Outbuildings: barn 32x44; poultry house; hog houses and wood house, in good condition. Fine cellar under house and barn. Watered: house, by well; barns, by spring; fields by springs and brook. Occupied by tenant. Price, $2,000. Terms, ½ cash, balance on mortgage at 5%. Reason for selling, has another farm. Address William G. Shaw, owner, Spencer, N. Y. Owner will rent.

No. 666.— Farm of 10 acres; located ⅛ mile from Spencer P. O. and short distance from railway station on line of Lehigh Valley R. R.; ⅛ mile from school, churches, butter factory and milk station. Nearest city, Ithaca, population 16,750, 18 miles distant, reached by rail or highway. Nature of soil, loam. Acres in meadow, 7½. Acres tillable, 7½; in timber, 1, oak and hickory. Fruit, 10 plum, 5 peach, 8 cherry, 10 apple, 10 pear and 2 quince trees, and small fruit. Adapted to garden truck. Fences, wire, good condition. House, 17 rooms arranged for two families, good condition. Outbuildings: barn, hog house, poultry house, all in good condition. House, watered by well. Occupied by owner. Reason for selling, other business. Price, $1,800. Terms, $1,200 cash, balance on mortgage. Address William Stark, owner, Spencer, N. Y.

No. 667.— Farm of 250 acres; located 6 miles from postoffice at Spencer, R. D. No. 1; 4 miles from railway station at West Candor, on line of Lehigh Valley R. R.; ¾ mile from school; 6 miles from churches, milk station and condensing plant. Nature of highways, state and good country road. Nearest city, Ithaca, population 16,750, distant 14 miles, reached by rail and highway. General surface of farm, gently rolling. Altitude, 1,400 feet. Nature of soil, subloam or clay loam, 50-acre ridge shaly. Acres that can be used as meadow, 130; acres now used as meadow, 65; in natural pasture, 55; in timber, 65, maple, beech, hemlock, chiefly; but considerable other hard and soft timber, plenty of chestnut and locust for posts, 1,200 sugar maples. Acres tillable, 185. Fruit trees, 70 apple, 12 pear, 10 plum, 5 peach, few cherry and 3 or 4 large grape vines. Adapted to potatoes, beans, cabbage, hay, grain, especially corn, buckwheat, oats, peas, barley, wheat, rye, etc. Fences, mostly woven wire in good condition; some new posts needed; some rail and stone wall fences. Two-story house, 10 rooms, cellar; in fairly good condition. Two sets barns, main barn, 30x70; cow barn, 20x54, hay loft above and with annex, 12x30 feet, 25 stanchions; No. 2, main barn, 30x40; 3 sheep and cattle sheds, 16x32 each; several other small outbuildings, including hog house, 14x16. House and barns watered by springs; fields by springs, wells and brook. Farm at present unoccupied. Reason for selling, to settle estate. Price, $7,000. Terms, reasonable payment down, balance in mortgage. Clear title guaranteed. Address Dr. L. J. Bingham, 133 East State St., Ithaca, N. Y.

TOWN OF TIOGA

Population 2,004

No. 668.— Farm of 100 acres; located 1¼ miles from Tioga Center P. O.; 1½ miles from railway station, on line of Erie & L. V. R. Rs.; 1 mile from school; 1½ miles from churches and milk station. Highways, good. Nearest village, Owego, population 4,570, reached by rail, highway and auto bus. General surface of farm, rolling. Altitude, 700 feet. Nature and quality of soil, loam; good. Acres that can be used as meadow, 60; in natural pasture, 10, and 30 acres wood, with some timber. Acres tillable, 70. Fruit, about 20 small trees of various kinds. Adapted to corn, potatoes, oats, rye and buckwheat. Fences, wire and pine stump, fair condition. House, 2 stories, L shape, 16x32, each L nearly new. Outbuildings: 2 barns, one 32x44, with basement, good condition; cow barn, 16x32, with basement; 14-foot silo, good condition. House watered by spring, barns by spring, and fields by spring and creek. Occupied by tenant. Reason for selling, owner not able to work it. Price, $3,000. Terms, one-third cash, balance on mortgage at 5%. Address Fred Clark, owner, Tioga Center, N. Y.

TOMPKINS COUNTY

Area, 494 square miles. Population, 36,535. Annual precipitation, 38.28 inches. Annual mean temperature, 47.3°. Number of farms, 2,988. County seat, Ithaca.

This county is situated in the south central part of the state and includes the Southern part of Cayuga Lake, the head of which is near the middle of the county.

The surface is partly undulating and is diversified with hills and valleys. In the northern part of the county, from a line running east from Ithaca, the surface is gently rolling and level. The southern and eastern portions of the county are quite hilly, with wide valleys and deep ravines. The soil of the entire county is mostly of a rich sandy and gravelly loam with deposits of black loam scattered over the northern part. About nine miles northwest of Ithaca is a cataract called Taughannock Falls, which has a height of 190 feet. This is higher than Niagara Falls. Forests of pine, oak, ash, elm, beech, sugar maple, etc., cover a considerable portion of the county. Tully limestone, slate and sandstone are among the minerals of the county. The county ranks third in the production of salt.

Along the shore of Cayuga Lake, the grape industry is in a high state of development. Leading crops as reported were: corn, shelled, 96,301 bushels; oats, 544,315 bushels; wheat, 159,260 bushels; buckwheat, 107,820 bushels; barley, 71,560 bushels; potatoes, 138,734 bushels; hay and forage, 89,180 tons. Of domestic animals there are reported: dairy cows, 12,695; horses, 7,832; swine, 6,871; sheep, 10,320; poultry, 213,389. The total value of farm property is $14,896,795, an increase of 17 per cent. from 1900 to 1910. The average price of improved farm land is $42.82 per acre. The milk production was 8,059,296 gallons; total receipts from the sale of dairy products, $732,549.

The county is intersected by the main line and three branches of the Lehigh Valley railroad and by a branch of the Delaware, Lackawanna and Western. Ithaca has a population of 16,750 and is the seat of Cornell University, one of the leading educational institutions in the country. The State Agricultural College is also located there. There are 152 district schools, which, with the academies and graded schools in villages, furnish excellent educational facilities. The 35 milk stations and factories supply the needs of the farmers along dairy lines; and the interest in farming and fruit raising is maintained by an ample number of agricultural organizations.

TOWN OF DANBY

Population 1,230

No. 669.— Farm of 120 acres; located 2½ miles from Brookton P. O., R. D. No. 24; 1½ miles from railway station at Caroline, on line of D. L. & W. R. R.; ¾ mile from school; 1½ miles from churches; 4½ miles from butter factory; 6 miles from cheese factory; 7 miles from milk station and condensing plant. Highways, usually good. Nearest city, Ithaca, population 16,750, 7 miles distant, reached by rail or highway. Surface of farm, nearly level. Acres that can be used as meadow, 80; in natural pasture, 20; in timber, 30, hardwood. Acres tillable, 80. Fruit, 40 trees of different varieties, also 10 peach trees. Best adapted to hay, potatoes and grains. Fences, wire, good condition. House, good size, in good condition. Barn, 30x40, fair condition. House watered by well, barns by well and fields by springs. Occupied by tenant. Reason for selling, other business. Price, $2,500. Terms, $1,000 cash, balance on time. Address A. B. Smith, owner, Branchport, N. Y. Will rent.

TOWN OF DRYDEN

Population 3,556

No. 670.— Farm of 100 acres; located 3 miles from postoffice and railway station at Dryden, on line of Lehigh Valley R. R.; 2 miles from school; 3 miles from churches and milk station. Good highways, level and hilly. Nearest city, Ithaca, population, 16,750, distant 10 miles, reached by highway. General surface of farm, level and rolling. Nature of soil, gravelly loam. Acres in timber, 100, small hardwood, enough to pay for

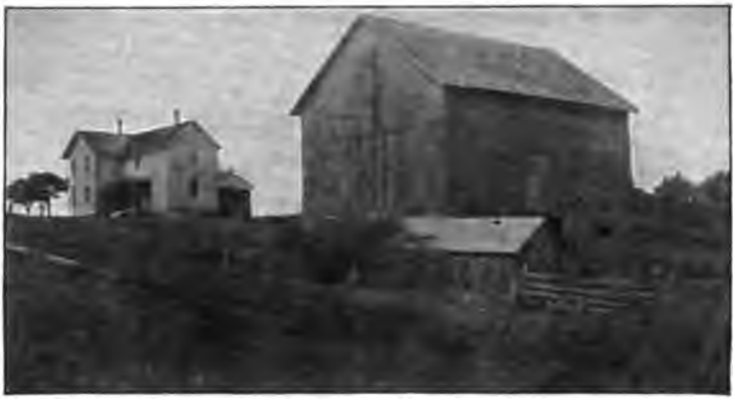


Fig. 73.— Buildings on Farm No. 665, Town of Spencer, Tioga County.

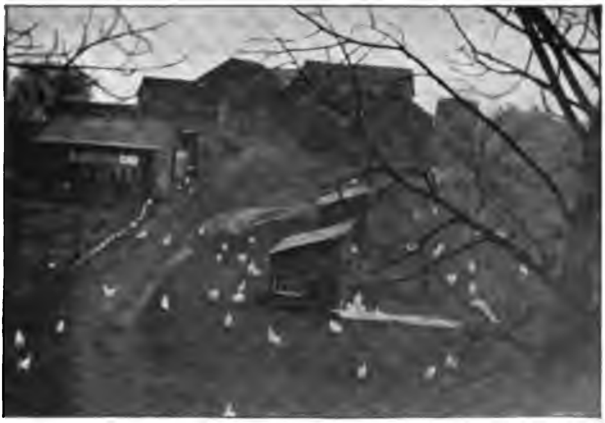


Fig. 74.— Buildings on Farm No. 684, Town of New Paltz, Ulster County.

farm. All tillable when cleared. Adapted to corn, potatoes, grains and grasses. No fences, house, nor barns. Mineral and other springs. Farm bought for timber. Reason for selling, owner moved south for health. Price $300. Terms, ¼ down, balance in four payments with interest at 6%. Large timber cut off 20 years ago. Address C. R. Finch, Clover, Va.

TOWN OF ENFIELD

Population 1,057

No. 671.— Farm of 102 acres; 2 miles from post office; 9½ miles from railway station at Trumansburg; ½ mile from school; 3 miles from churches. Highways, state road. Soil, good. Some timber. Fruit, apple orchard. Adapted to any kind of crop. Fences, in fair condition. No house. Two barns, in fair condition. Watered by well, creek and streams. Reason for selling, to settle an estate. Price, $3,800. Terms, part cash, remainder on time. Address Sophia A. White, owner, 58 Port Watson street, Cortland, N. Y.

TOWN OF GROTON

Population 3,501

No. 672.— Farm of 78½ acres; located 1½ miles from McLean P. O. R. D. No. 14, Groton; 1½ miles from railway station at McLean, on line of Lehigh Valley R. R.; ¾ mile from school; 1½ miles from churches; 2 miles from butter factory; 4 miles from cheese factory and 2 miles from milk station. Highways, good. Nearest city, Cortland, population 12,367, 6 miles distant, reached by rail and highway. General surface, level and rolling. Nature of soil, gravelly loam. Acres in meadow, 70; in natural pasture, 6; in timber, 6, maple, elm and beech. Acres tillable, 70. Fruit, apples, pears and plums. Best adapted to wheat, corn, oats and potatoes. Fences, wall and wire. Large house, good condition. Barns enough for size of farm, fair condition. Watered, house, by running water and well; barns by running water; and fields, by springs and brook. Unoccupied. Reason for selling, ill health. Price, $45 per acre. Terms, $1,000 cash, balance on mortgage at 5%. Address Searls Butts, owner, Groton, N. Y., R. D. 13.

TOWN OF LANSING

Population 2,612

No. 673.— Farm of 150 acres; located 1½ miles from South Lansing P. O. and railway station, on line of Ithaca and Auburn R. R.; ½ mile from school; 1 mile from churches; ½ mile from butter factory and two creameries and ¾ mile from milk station and condensing plant. Highways, level, good. Nearest city, Ithaca, population 16,750, 8 miles distant, reached by rail or highway. Altitude, 500 feet. Soil, gravelly loam. Acres that can be used as meadow, 75; in natural pasture, 15; in timber, 2, mostly maple. Acres tillable, 135. Fruit, 200 trees of different varieties. Adapted to all kinds of grain, potatoes, beans, etc. Fences, nearly all wire, in good condition. 14-room house, also 7-room tenant house, in good condition. Outbuildings: new barn, 36x56; stanchions for 15 cows; milk house, etc. Watered, house by well, barns piped from spring; fields by springs and brooks. Occupied by owner. Reason for selling, ill health. Price, $14,500. Terms on application. Stock, up-to-date farm machinery, etc., can also be purchased at a reasonable price. The State College of Agriculture at Ithaca only 8 miles distant. Address S. B. Furman, owner, Ithaca, N. Y., R. D. No. 1.

TOWN OF NEWFIELD

Population 1,647

No. 674.— Farm of 105 acres; located 6 miles from Newfield P. O., R. D. No. 29; 5 miles from railway station at Alpine, on line of Lehigh Valley R. R.; ¼ mile from school; 2½ miles from churches and milk collected at the door. Highways, hilly. Nearest city, Ithaca, population 16,750, 11 miles distant, reached by highway. General surface, nearly level. Altitude, 2,000 feet. Nature of soil, clay loam. Acres that can be used as meadow, 70; now used as meadow, 25; in natural pasture, 12; in timber, 15, chestnut, oak, maple and pine. Acres tillable, 90. Fruit, 50 apple, 12 cherry trees, 15 grape vines and berries. Adapted to potatoes, buckwheat, oats and hay. Fences, rail and wire. Five-room house, not very good. Outbuildings: barn, 30x40, with basement, hip roof, good condition; poultry house and shed. Watered, house, by well; barns, by well; and fields, by spring. Occupied by owner. Reason for selling, old age. Price, $17 per acre. Terms, $800 cash, balance on 5 years' mortgage. Address Palmer Sickler, owner, Newfield, N. Y.

No. 675.— Farm of 85 acres, 2 miles from Newfield. Good house and barn. Well watered. Price, $1,800. Address Sophia A. White, owner, 58 Port Watson street, Cortland, N. Y.

No. 676.— Farm of 406 acres; located 6 miles from postoffice at Newfield, R. D. No. 26; 2½ miles from railway station at West Danby, on line of Lehigh Valley R. R.; 40 rods from school; 2 miles from church; 2½ miles from milk station; 6 miles from condensing plant. Hilly but fine roads. Nearest city, Ithaca, population 16,750, distant 12 miles, reached by macadam road and rail. General surface of farm, slightly rolling. Altitude, 1,970 feet. Soil, clay loam. Twenty acres now used as meadow; acres in natural pasture, 50; in timber, 180, hardwood. Acres tillable, 150. Fruit trees, 200 apple, pear, cherry. Best adapted to any kind of grain and hay. New woven wire fence. Good house of 10 rooms. Barns, 36x80, with basement room for 40 cows and 4 horses; 36x40; various outbuildings. House watered by well; barns and fields by springs. Farm now occupied by owner. Reason for selling, poor health. Price, $5,000. Terms, $2,000 down balance $200 yearly with interest at 6%. Address John Lehtonen, Newfield, N. Y.

ULSTER COUNTY

Area, 1,150 square miles. Population, 85,367. Annual precipitation, 38.28 inches. Annual mean temperature, 46.3°. Number of farms, 5,022. County seat, Kingston.

This county is located in the eastern part of the state and is bounded on the east by the Hudson River. It is intersected by the Wall Kill and Rondout River and is drained by the Neversink and the Shawangunk Rivers and by Esopus Creek.

The surface is hilly and partly mountainous and is extensively covered with forests of hickory, oak, chestnut, elm, pine, sugar maple, hemlock, etc. The Shawangunk Mountains are situated in the southern part and Catskill Mountains in the northern part. There are several lakes, one of which is Lake Mohonk, a popular summer resort. Sandstone is found here in abundance and large quantities are quarried and shipped to New York City and other points by water. Extensive quantities of water lime are used in making Portland cement, an industry which exceeds a million dollars in value annually. The soil is quite productive, especially in the valleys along the Hudson River and is mostly of a clay and gravelly loam; considerable limestone soil is also found. Crops reported are: corn, shelled, 195,234 bushels; oats, 247,524 bushels; wheat, 27,909 bushels; buckwheat, 56,536 bushels; rye, 65,596 bushels; potatoes, 165,225 bushels; hay and forage, 70,302 tons. Along the Hudson River, conditions are exceedingly favorable for the growing of small fruits and apples, pears, peaches, etc. This county ranks first in the production of small fruits and third in the production of grapes. The villages and cities of the county furnish large markets and New York City can be reached quickly and cheaply by way of the Hudson River. The valuation of all farm property is $29,439,672, an increase of 16.7 per cent from 1900 to 1910. There is a large acreage offered for sale in this bulletin at a price below the agricultural value of the land. Domestic animals reported: dairy cows, 16,199; horses, 9,137; swine, 11,377; sheep, 3,997; poultry, 387,804. Total production of milk, 10,702,160 gallons, and the total value of all dairy products is $1,015,894.

Excellent transportation facilities are found in this county and the markets are ample for everything that can be raised. The city of Kingston has a population of 26,354 and is located 85 miles from New York City and 55 miles from Albany. At New Paltz, a state normal college is located. Two hundred and eighteen district schools and academies and graded schools in villages give ample educational advantages. There are 74 miles of state and county roads and 1,561 miles of other improved highways. Ulster county has 16 agricultural associations for the promotion of general farming and stock raising.

TOWN OF GARDINER

Population 1,328

No. 677.— Farm of 150 acres; located 3 miles from New Paltz, on line of Wallkill Valley R. R.; ½ mile from school; 3½ miles from churches, milk station and milk condensing plant. Highways, good. Surface of farm, mostly level. Acres in meadow, 25; in natural pasture, 16; in timber, 10. Acres, tillable, 110. Fruit, 3 acres of apples. Best adapted to general farming. Fences, wire and stone wall, good. House, 62x25, 2½ stories, 14 rooms; tenant house, 2 stories, 4 rooms. Both houses practically new. Barn, 123x30. Watered by well, cistern and spring. Occupied by tenant. Price, $3,900. Terms, half down, balance on mortgage. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D. Will rent.

No. 678.— Farm of 176 acres; located 3 miles from New Paltz, on line of Wallkill Valley R. R.; 1 mile from school; 3½ miles from milk station, and churches. Highways, good. Surface of farm, mostly level. Soil, clay loam. Acres in meadow, 10; in natural pasture, 26; in timber, 11. Acres tillable, 118. Some fruit. Best adapted to general farming. Fences, stone wall and wire. House, large, 12 rooms, nearly new; 2 tenant houses, four and five rooms. Outbuildings: barn, 45x45, leanto attached, 30x40, accommodate 50 head of stock, granary, wagon house and poultry house, all in first-class condition. Watered, house, by well and cistern; barns, by well; fields, by stream. Occupied by tenant. Reason for selling, owner in other business. Price, $3,900. Terms, half down, balance on bond and mortgage. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D. Will rent.

TOWN OF HARDENBERGH

Population 563

No. 679.— Farm of 260 acres; 2 miles from Lew Beach P. O.; 8 miles from station at Shavertown, on line of D. & N. R. R., ½ mile from school; 2 miles from churches. Highways, hilly. Surface, rolling. Soil, red slate, clay and loam, mixed. 80 acres of meadow; 90 acres of pasture; 100 acres timber, hemlock, hard wood, etc.; about 150 acres tillable. Large apple orchard and a few pear trees. Maple orchard of about 400 trees. Adapted to raising of oats, rye, buckwheat, potatoes, and to dairying. Fences of stone, wire and board, in fair condition. 1½ story house, 8 rooms, in fair condition. Barn, 26x48, with annex, 14x48; wagon house, 24x26, with annex, 26x36; granary; poultry house; hog pen; sap house, in fair condition. House and barns are watered by springs; fields, have springs and a trout stream. A good dairy, sheep and poultry farm, with good markets. Occupied by owner. Price, $3,500. Terms, $1,500 cash, balance easy. Address Byron Barnhart, owner, Lew Beach, Sullivan County, N. Y.

No. 680.— Farm of 146 acres; located 1½ miles from Seager P. O.; 6 miles from railway station at Fleischmans, on line of U. & D. R. R.; 1 mile from school; 2½ miles from churches; 6 miles from butter factory, cheese factory, milk station and condensing plant. Highways, good. General surface of farm, rolling. Altitude, 2,400 feet. Nature and quality of soil, red slate and loam. Acres in meadow, 30; in natural pasture, 20; in timber, 96, beech, birch, maple and basswood. Acres tillable, 100. Fruit, apple trees of all varieties. Adapted to buckwheat, cauliflower, oats, potatoes and hay. Fences, wire, good condition. House, 28x32, good condition. Barn, 30x50; poultry house, 10x20, good condition. House, barn and field watered by springs. Occupied by tenant. Reason for selling, other business. Price, $2,500. Terms, half cash, balance on mortgage. Address W. Scott Haynes, owner, Arena, N. Y. Will rent.

TOWN OF KINGSTON

Population, 323

No. 681.— Farm of 86 acres; located 2 miles from Kingston P. O., R. D. No. 4 and railway station on line of W. S. R. R.; 1 mile from churches and school; 2 miles from butter factory and condensing plant. Highways, good. Nearest village, Saugerties, population 4,490. General surface, level and rolling. Nature of soil, sand and muck. Acres in timber, 15; tillable, 50. Adapted to general farming. House, 50x40, brick, 2 stories and basement, 12 large rooms, in good condition. Outbuildings: barn, 50x40, fair condition; barn, 15x35, for garage and room. Watered, house, by spring near, and barns, by spring. Occupied by owner. Reason for selling, ill health. Price, $5,000. Terms, ½ cash, balance on mortgage. Address Augusta Gilbert, owner, Kingston, N. Y., Box 182. Will rent with option to buy.

TOWN OF LLOYD

Population 2,865

No. 682.— Farm of 71 acres; located 3½ miles from Highland P. O., R. D. No. 4; 1 mile from railway station at Lloyd, on line of C. N. E. R. R.; ½ mile from school; ¾ mile from church; 5 miles from milk station. Good highways. Nearest city, Poughkeepsie, population 32,714, distant 5 miles, reached by highway, trolley and train. General surface of farm, rolling. Altitude, 475 feet. Nature of soil, loam. Acres that can be used as meadow, 40; acres now used as meadow, 15; in natural pasture, 7; in timber, 9, oak, chestnut and maple. Acres tillable, 50. Fruit trees: 250 apple, 1,000 pear, 125 plum, 30 cherry, 7,000 currants, 500 grapes, 100 peaches, and other kinds. Adapted to all kinds of crops. Good fences. Good house, 38x40, with modern improvements. Barn, 32x50; hay house, 22x45; granary, 26x32; garage and hog house, 43x20. Hot and cold water in house; barns watered by running water. Now occupied by owner. Reason for selling, desire to retire on account of old age. Price, $12,000. Terms, ½ down. Farm all in high state of cultivation. Address Frank Wilklow, owner, Highland, N. Y.

No. 683.— Farm of 62 acres; located 4 miles from postoffice at Highland, R. D. No. 4; railway station, Lloyd, on line of C. N. E. R. R.; ½ mile from churches; 4 miles from cheese factory and condensing plant. Good highways. Nearest village, New Paltz, population 1,261, distant 4 miles reached by trolley. General surface of farm, partly level and rolling. Nature of soil, loamy. Acres that can be used as meadow, 58. Timber for home use, white oak. Acres tillable, 48. Fruit trees, 60 apple, 3 plum, 8 cherry. Adapted to all crops grown in county. Stone and wire fences. Stone house, 48x35, colonial style, good condition. Eight outbuildings, partly rebuilt; 1 large barn with 8 stanchions and 4 stalls. House watered by well and cistern; barns by nearby stream; fields by springs and streams. Near Hudson River and Wall Kill. Now occupied by owner, who can vacate at once. Reason for selling, old age and poor health. Price, $3,900, Terms, ½ down. Address Ida M. Chandler, Highland, N. Y.

TOWN OF NEW PALTZ

Population 2,569

No. 684.— Farm of 125 acres; located 2½ miles from New Paltz P. O., and railway station on line of Wallkill Valley R. R.; 1 mile from school; 2½ miles from churches and milk station. Highways, good. Acres that can be used as meadow, 100; in natural pasture, 10; in timber, 13, hickory, chestnut, maple and oak. Acres tillable, 100. Fruit, 4 acres of grapes and 4 acres of apples. Adapted to hay. Fences, wire. House, 26x35, good condition. Outbuildings: barns, 40x40, 24x40, silo attached, 20x 50; tool house, 16x20; granary; garage; poultry house, etc. Watered, house and barns, from a reservoir; fields, by springs. Occupied by owner. Reason for selling, wish to retire. Price, $7,000. Terms, ½ cash. Address D. W. Corwin, owner, New Paltz, N. Y.

TOWN OF ROCHESTER

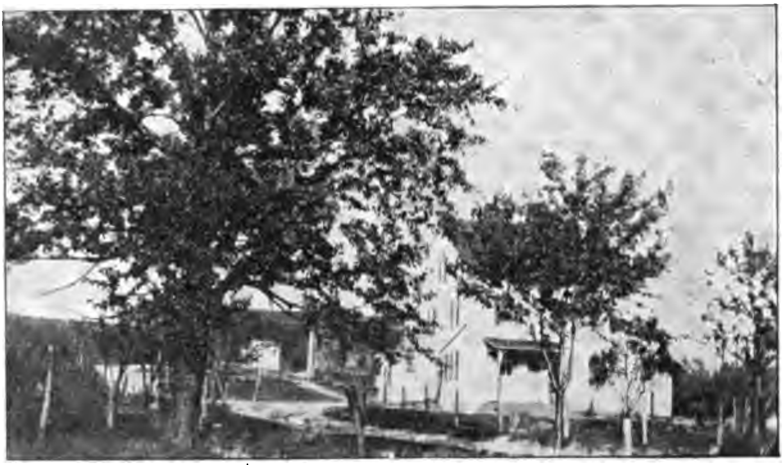
Population 2,715

No. 685.— Farm of 143 acres; 3 miles from Mombaccus P. O., R. D. No. 1; 6½ miles from railway station at Kerhonkson on line of O. & W. R. R., 1¾ miles from school; ¾ mile from church; 6½ miles from milk station. Highways, hilly, but good. Nearest city, Kingston, population 26,354, 26 miles distant, reached by rail. Surface, part level and part hilly. Soil, mostly gravelly loam. Acres in meadow, 20; in orchard and natural pasture, 65; in timber, 58, chestnut, hickory and oak; acres tillable, 85. Fruit, about 375 trees, mostly apple. Adapted to hay and fruit. Fences, wire and stone wall, in good condition. House, 24x38, wings, 15x31, and 10x12, in good condition. Barn, 27x70, with large shed and stable attached; carriage house, 22x26; all in good condition. Watered, by well and spring. Occupied by tenant. Reason for selling, old age. Price, $4,000. Terms, $1,500 cash, balance on mortgage at 5%. Address H. D. & S. E. Brodhead, owners, Kerhonkson, N. Y.

TOWN OF ROSENDALE

Population 2,896

No. 686.— Farm of 10½ acres; located 3½ miles from postoffice at Kingston, R. D. No. 1; ½ mile from railway station at Whiteport, on line of N. Y. C. R. R.; ½ mile from school and milk station; ⅛ mile from church. Good state road. Nearest city, Kingston, population 26,354, distant 3½ miles, reached by rail and highway. General surface of farm, level. Sandy soil. Acres used as meadow, 5. Acres tillable, 10½. Fruit trees, 5 apple, 8 peach, 2 pear, 4 cherry, 2 plum; currants and grapes. Adapted to potatoes, corn, beans and berries. Wire fences. Frame house, 20x40, in good condition. Barn, frame,



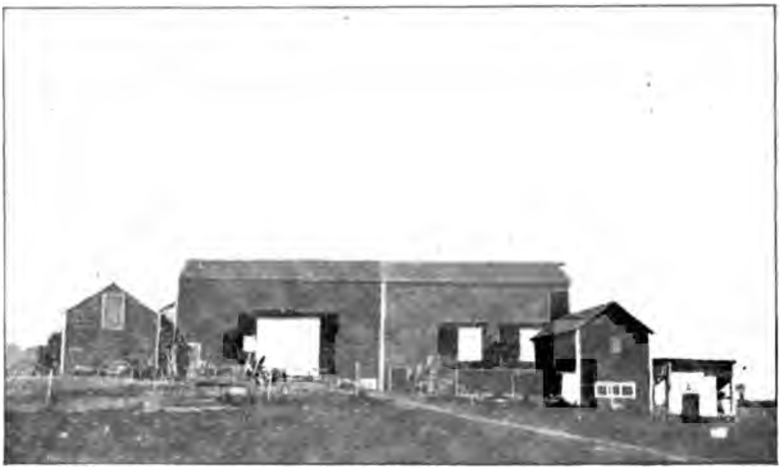


Fig. 75.— Buildings on Farm No. 678, Town of Gardiner, Ulster County,

30x15, with extension, good condition; also large chicken house. House and barn watered by cisterns. Rondout creek 1 mile distant. Farm at present unoccupied. Reason for selling, other business. Price, $2,500. Terms, $1,500 cash, balance on mortgage. Address Joseph Gretler, owner, 216 Willoughby avenue, Brooklyn, N. Y.

TOWN OF SAUGERTIES

Population 9,856

No. 687.— Place of 10 acres; ¼ mile from West Camp P. O. and railway station on line of W. S. R. R.; ¼ mile from school and church; 1½ miles from butter factory. Nearest large villages, Saugerties, population 4,490, 3½ miles distant, reached by rail and highway, and Catskill, population, 5,371, 8 miles distant, reached by rail and highway. Surface of farm, rolling, with high rock ridge overlooking Hudson river. Altitude, about 300 feet. Soil, gravelly and clay loam. Acres in meadow, 3; in natural pasture, 1; in timber, ¼, cedar grove; acres tillable, 8. Fruit, 60 apple trees, ¼ acre of Concord grapes, besides cherries and plums. Adapted to all kinds of vegetables, grains, alfalfa and small fruits. Fences, stone, wire and wood, fair condition. House, 8 rooms, 18x32, outside summer kitchen, 12x14, house has new cedar shingling. Outbuildings: barn, 26x30, with ell, 18x22, shed, wagon house, 12x18; and hog house, 12x12. Watered: house, by never-failing spring and cistern; fields, by spring near center of farm. This farm is a short distance from Hudson river, about 10 minutes' walk. Catskill Mountains are about 8 miles from farm; Kaaterskill and Old Mountain House in view. This would make a good poultry farm. Occupied by tenant. Reason for selling, owner has other business. Price, $2,000. Terms, $500 cash, balance on time or will sell on contract. Address E. F. Youngs, owner, West Camp, N. Y., Box 25.

TOWN OF ULSTER

Population 3,487

No. 688.— Farm of 207¼ acres; located 1 mile from Kingston P. O., R. D. 1, and railway station on line of West Shore, U. & D., Wallkill Valley, N. Y. O. & W. R. Rs.; 1 mile to school; 1 to 3 miles to churches of all denominations. Highways, state road, 66 acres within city limits of Kingston, population 26,354, reached by highway or trolley. Surface of farm, level, hilly and rolling. Acres in meadow, 75; in natural pasture, 60. All tillable. Fruit, about 70 trees, apple, pear, cherry and mulberry. Adapted to grain, fruit, hay, etc. Fences, wall and wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: stable 110x66; ice house, milk house, granary, poultry house of concrete, silo, large hay barn, also main barn equipped to produce certified milk. Watered, house by well and cistern; barns, by well and pumping engine; fields by springs, pond and brook. This farm is 3 miles from the Hudson river. Price, $30,000. Terms, $10,000 or less cash, balance on mortgage. Would consider trade for Albany property. Address B. A. Knapp, owner, 107 South Lake avenue, Albany, N. Y. Substantial reduction to cash buyer.

TOWN OF WAWARSING

Population 7,507

No. 689.— Farm of 60 acres; located 1½ miles from Ellenville P. O.; 2 miles from railway station at Ellenville, on line of N. Y. O. & W. R. R.; 1 mile from school; 1½ miles from churches; 2 miles from milk station. Macadam highways. Nearest village, Ellenville, population 3,073, distant 1 mile, reached by highway. General surface of farm, rolling. Altitude, 600 feet. Acres that can be used as meadow, 30; in timber, 20, oak and chestnut. Acres tillable, 30. Adapted to oats, corn and buckwheat. Stone and wire fences. No buildings on farm which is worked by owner. Fields are watered by springs. Shawangunk Mountain near by. Price, $1,000. Terms, $500 down, balance mortgage. Will rent. Address William A. Hasbrouck, owner, Ellenville, N. Y.

No. 690.— Farm of 170 acres; located ½ mile from Greenfield P. O., R. D. No. 1; 6½ miles from railway station at Ellenville, on line of N. Y. O. & W. R. R.; 1 mile from school; ½ mile from churches; 3½ miles from milk station. Highways, macadam 6½ miles, hilly 3½ miles. Nearest village, Ellenville, population 3,073, distant 6½ miles, reached by highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, heavy. Acres that can be used as meadow, 50; number now so used, 25; in timber, 50, beech, birch, maple, pine. Acres tillable, 75. Plum, pear and apple trees. Adapted to oats, corn and potatoes. Stone and wire fences. One-story stone house, 30x40. One barn, 40x50, needs repairs. House watered by well and spring. Shawangunk Mountain 7 miles distant. Farm now occupied by owner. Price, $8,000. Terms, ½ down, balance in mortgage. Address Sarah B. LeFevre, Greenfield, Ulster County, N. Y.

No. 691.— Farm of 119 acres; located 1¼ miles from Greenfield P. O., R. D. No. 1; 7¼ miles from railwa station at Ellenville on line of N. Y. O. & W. R. R.; 1¼ miles from school and churches; 3½ miles from milk station. Highways hilly. Nearest village, Ellenville, population 3,073, distant 7¼ miles, reached by highway, macadam. General surface of farm, rolling. Altitude, 1,100 feet. Nature of soil, red slate. Acres used as meadow, 50; in timber, 15, beech, birch, chestnut. Acres tillable, 50. Thirty-five or 40 apple trees. Adapted to oats, buckwheat, corn, potatoes. Stone and wire fences. House, 28x32, ell 16x18, 2 stories, good condition. Old barn, 30x40. House and barn watered by wells; fields by springs. Shawangunk Mountains 8 miles distant. Farm now occupied by owner. Reason for selling, old age. Price, $6,500. Terms, $3,000 down, balance mortgage. Address E. G. New Kerk, Greenfield, N. Y.

No. 692.— Farm of 80 acres; located ¼ mile from Greenfield P. O., R. D. No. 1; 6 miles from railway station at Ellenville, on line of N. Y. O. & W. R. R.; ½ mile from school and churches; 6 miles from milk station. Highways, macadam. Nearest village, Ellenville, population 3,073, distant 6 miles, reached by highway. General surface of farm, hilly. Altitude, 1,000 feet. Sandy soil. Acres that can be used as meadow. 50; number now so used, 45; in timber, 15, beech, birch and maple. Acres tillable, 45. Three apple orchards. Adapted to potatoes, corn, rye, oats, buckwheat. Stone fences. Large farm house in good condition. New barn, 30x60. House watered by well and springs; barns and fields by springs. Shawangunk Mountains 8 miles distant. Farm now occupied by owner. Price, $5,000 net. Will rent. Address Paul Nichols, Greenfield, N. Y.

TOWN OF WOODSTOCK

Population 1,605

No. 693.— Farm of 150 acres; located ½ mile from Woodstock P. O.; 4 miles from railway station at West Hurley, on line of U. & D. R. R.; ½ mile from school and churches; 4 miles from milk station. Highways, all state road. Nearest city, Kingston, population 26,354, distant 10 miles, reached by rail and highway. General surface of farm, level. Altitude, 1,000 feet. Nature of soil, sandy loam. Acres used as meadow, 90; in natural pasture, 10; in timber, 50, pine, hemlock, oak. Acres tillable, 90. Apple trees, 45, and all small fruit. Adapted to potatoes, corn, wheat, rye, oats, alfalfa. Wire fences in good condition. Ten-room house in excellent condition. Wagon house, 22x66; 2-story barn, 56x66x20; shed, 28x44; hog house; hen house, granary, 18x24; all modern buildings, concrete foundations. House watered by well, inside tap; barns by well; fields by spring. Catskill Mountains 4 miles distant; Hudson River, 10 miles. Occupied by owner. Reason for selling, to settle estate. Price, $8,500. Terms, ½ cash, ½ mortgage. This farm has never before been offered for sale. Address Norvin R. Lasher, Saugerties, N. Y.

WARREN COUNTY

Area, 940 square miles. Population, 32,977. Annual precipitation, 32.41 inches. Annual mean temperature, 45.2°. Number of farms, 1,865. County seat, Lake George.

This county is located in the eastern part of the state and is bounded on the east by Lake George, is intersected by the upper Hudson River and is partly drained by the Schroon River.

The surface is mountainous and extensively covered with forests of beech, hickory, oak, elm, pine, spruce, sugar maple and hemlock. Many of the mountains and hills are steep and present a broad surface of barren rock. Gneiss and granite are the predominant rocks of the county. Trenton limestone and Potsdam sandstone are found in the southeastern part, also black marble. The valleys are fertile and well adapted to pasture. The soil is largely clay loam along the Hudson and

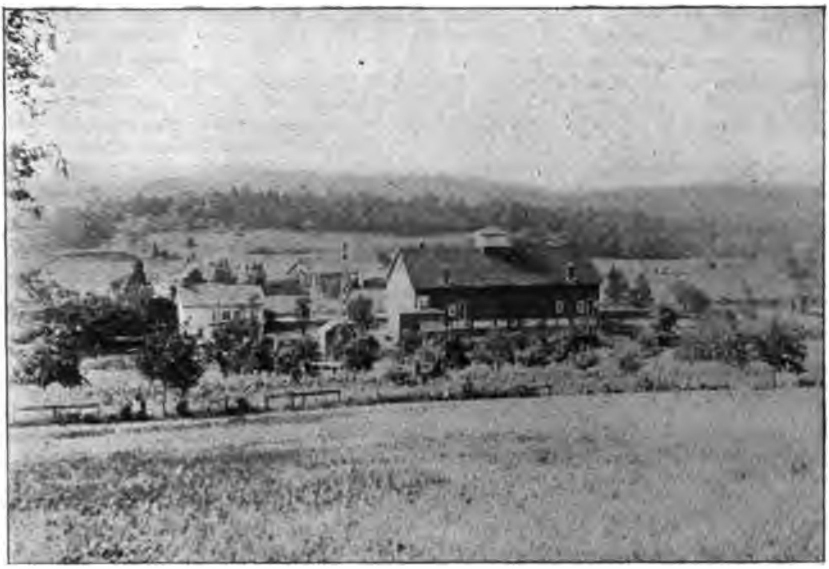


Fig. 76.— Buildings on Farm No. 688, Town of Ulster, Ulster County.

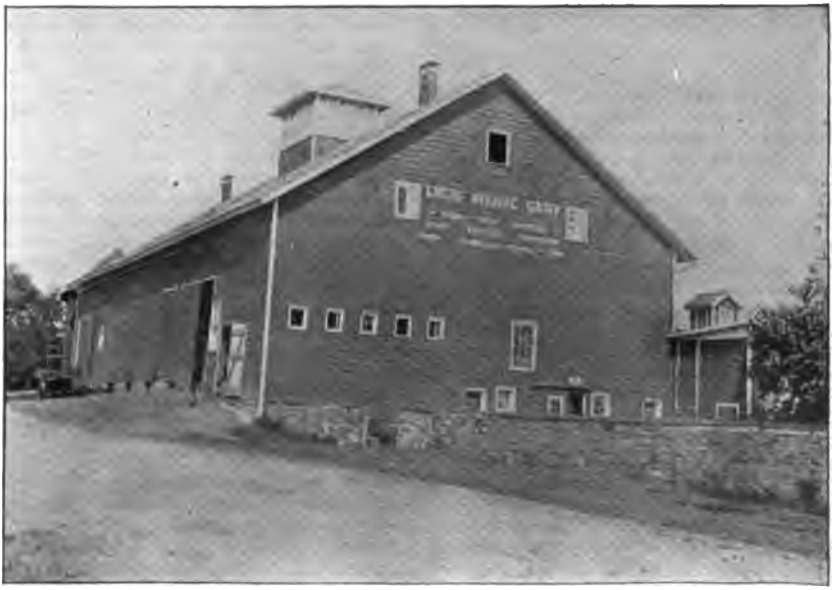


Fig. 77.— Dairy Barn on Farm No. 688, Town of Ulster, Ulster County.

Schroon River Valleys, while that in the region of and south of Lake George is sandy and gravelly loam. Crops are reported as follows: corn, shelled, 46,738 bushels; oats, 52,327 bushels; buckwheat, 15,810 bushels; potatoes, 109,451 bushels; hay and forage, 21,891 tons. Lumber is one of the leading products of the county. The total valuation of farm property is $6,589,308, an increase of 61 per cent. during the past ten years. Domestic animals reported are dairy cows, 4,908; horses, 2,400; swine, 3,250; sheep, 8,298; poultry, 85,127; production of milk, 2,396,268 gallons; dairy products amounted to $170,423.

The county is traversed by the Adirondack division of the Delaware and Hudson railroad and one of its branches from Fort Edward to Lake George. Trolley lines from Albany, Troy, Schenectady and Saratoga Springs extend up through the county as far north as Warrensburg, through Lake George. Union and graded schools in the villages and towns, an academy at Glens Falls, with 111 district schools, afford the best of educational facilities. There are 70 miles of state and county roads, 791 miles of improved highways. Milk stations and creameries are located at Glens Falls and Lake George. In the county are three granges and one county fair society. Much of the increase of the value of farms and farm buildings is brought about by the large number of men of means purchasing tracts or summer homes and cottages in the mountains and along the lake shores.

TOWN OF BOLTON

Population 1,397

No. 694.— Farm of 170 acres; located 4 miles from P. O.; 10 miles from railway station at Warrensburg on line of D. & H. R. R.; 1/8 mile from school; 2 miles from churches. Highways, somewhat hilly, but good. Surface of farm, some stone but can mow with machine. Soil, fair. Acres in meadow, 21; in natural pasture, 40; in timber, 109, pine, hemlock and maple. Acres tillable, 30. Fruit, apples and plums. Best adapted to potatoes, corn and oats. Fences, stone wall and wire, fair condition. House, 26x20, new. Outbuildings: barn, 30x46; shed, 30x16; poultry house, 13x13. Watered by well, spring and brook. This farm is 1½ miles from Schroon river and 4½ miles from Lake George. Occupied by tenant. Reason for selling, owner lives in village. Price, $2,500. Terms, $500 down, balance easy. Address Chas. Davis, owner, Bolton Landing, N. Y. Will rent.

TOWN OF CHESTER

Population 1,630

No. 695.— Farm of 100 acres; 2½ miles from Chestertown P. O.; 2½ miles from railway station at Riverside on line of Adirondack R. R.; ¾ mile from school; 2½ miles from churches. Highways, state road. Nearest city, Glens Falls, population 16,323, 27 miles distant, reached by highway. Surface, rolling. Soil, sandy loam. Acres in meadow, 35; in natural pasture, 35; in timber, 30, pine, second growth poplar, balsam, tamarack and some hard wood; acres tillable, 50. Fruit, 50 apple trees. Best adapted to potatoes, buckwheat, corn and oats. Fences, rail and board, fair condition. House, 2 stories, 28x30, with wing, in good condition. Main barn burned, small building, fair condition. Watered by well, also fine spring water comes into house by pump. This is a good place to keep summer boarders; good place on lake front for nearly a mile. Reason for selling, other business. Price, $4,500. Terms to suit purchaser. Address Dr. F. E. Aldrich, owner, Chestertown, N. Y. Will rent with option to buy.

No. 696.— Farm of 112 acres; located ¼ mile from Chestertown P. O.; 6 miles from railway station at Riverside, on line of D. & H. R. R.; 15 rods from school; ¼ mile from churches. Highways, good macadam road. Altitude, 800 feet. Nature of soil, sandy loam. Acres used as meadow, 30; in natural pasture, 40; in timber, 40, white pine, spruce and hardwood. Acres tillable, 40. Best adapted to oats and potatoes. Fences, wire and rail, good condition. House, 1½ stories, 8 rooms. Outbuildings: barn, 26x36; granary, 15x20; carriage shed, 12x20; poultry house, 12x15; ash house, 8x10. House watered by well; barns by well and brook; and fields by brook. Occupied by tenant. Reason for selling, to settle estate. Price, $3,500. Terms, $1,000 cash, balance on mortgage. Will rent for one year for $200, or with option to buy. There is a good growth of young pine on the place. Address Estate of John H. Cunningham, 124 W. 121st street, New York city.

TOWN OF JOHNSBURG

Population 2,358

No. 697.— Farm of 90 acres; located 3 miles from Baker's Mills P. O.; 10 miles from railway station at North Creek, on line of D. & H. R. R.; 3 miles from churches. Highways, good. Surface of farm, rolling. Altitude, about 1,900 feet. Some timber. Fruit, apples and plums. Adapted to potatoes, corn, oats and buckwheat. Fences, wire, rail and pole. House, 20x30. Barn 30x40; shed, 25x40, good condition. Watered by spring, brook and well. Occupied by owner. Reason for selling, old age. Price, $2,000. Terms, cash. Address Mrs. Frances A. Wheeler, owner, Brandon, Vt.

TOWN OF LUZERNE

Population 1,070

No. 698.— Farm of 84 acres; located 4 miles from Luzerne P. O. and 5 miles from railway station at Hadley on line of D. & H. R. R.; 1 mile from school; 4 miles from churches. Highways, hilly. Nearest city, Glens Falls, population 16,323, 14 miles distant, reached by highway. General surface, rolling. Altitude, 650 feet. Nature of soil, light. Acres in meadow, 15; in natural pasture, 15; in timber, 40, pine, hemlock, poplar and hardwood. Acres tillable, 20. Fruit, some apples. Adapted to corn, hay, oats, potatoes and buckwheat. Fences, fair. House, small, fair condition. Barn, large, fair condition. House watered by well; barns, by well. Hudson river, 1 mile distant. Occupied by tenant. Reason for selling, other business. Price, $1,000. Terms. ½ cash, balance on mortgage. Address Nathan Pulver, owner, Luzerne, N. Y. Will rent.

TOWN OF QUEENSBURY

Population 2,721

No. 699.— Farm of 80 acres; 1 mile from Queensbury P. O.; R. D. 1; 5 miles from railway station at Glens Falls on line of D. & H. R. R.; 1 mile from school and Methodist church; 5 miles from milk station. Highways, good. Nearest city, Glens Falls, population 16,323, 5 miles distant, reached by highway. Surface, sloping to south. Soil, sandy loam. Acres in meadow, 7; natural pasture, 25; timber, 25, chestnut, pine and oak, second growth; acres tillable, 35. Fruit, 20 apple trees. Best adapted to potatoes and fruit. Watered by well and pond. Fences in poor condition. No buildings except poultry house. Price, $2,200. Terms, easy. Address Harriet A. Bentley, owner, 11 Pine street, Glens Falls, N. Y. Will rent for $80 per year.

WASHINGTON COUNTY

Area, 861 square miles. Population, 46,955. Annual precipitation, 35.6 inches. Annual mean temperature, 46.2°. Number of farms, 3,564. County seat, Hudson Falls.

This county is located in the eastern part of the state bordering on Vermont. Lake George bounds the county on the northwest and the Hudson River on the west. It is drained by the Hoosic, Pawlet and Poultney Rivers and by the Batten Kill and Weed Creek. Lake Champlain forms a part of the eastern boundary of the county.

The surface is hilly and mountainous. Along the eastern border extends a range of high hills composed wholly of shale, sand and clay. These hills by the action of rain and weather have deposited a rich deep loam in the valleys and lower uplands. The fertility of this loam is constantly being renewed by this same weather agency. Forests of beech, elm, sugar maple, spruce, hemlock and other trees cover a large part of the county. Among its minerals are iron ore, graphite, slate and water lime. The staple crops of the county are extensively raised, and are reported as follows: corn, shelled, 408,248 bushels; oats, 727,875 bushels; buckwheat, 42,001 bushels; rye, 71,605 bushels; potatoes, 609,758 bushels; hay and forage, 102,566 tons; considerable flax is also grown in the county. The value of all farm property is $18,459,934, showing a marked increase in ten years. The average price of improved land is $31.20 per acre. There are reported dairy cows, 25,323; horses, 10,560; swine, 10,832; sheep, 17,305; poultry, 227,602; production of milk, 13,521,120 gallons; total receipts from the sale of dairy products, $1,327,575.

The county is intersected by branches of the Delaware and Hudson railroad and by the Champlain canal. Whitehall is the principal town of the county and has large manufacturing interests, which use large quantities of lumber. There are 224 school districts in the county; 31 miles of state roads and 1,370 miles of graded and improved highways. There are 21 milk stations and factories in the county and 21 agricultural organizations contribute to the agricultural and farming interests.

TOWN OF CAMBRIDGE

Population 1,631

No. 700.— Farm of 55 acres; located 2½ miles from Cambridge P. O. and railway station on line of D. & H. R. R.; ½ mile from school; 2½ miles from churches, milk station and condensing plant. Highways, good dirt road, some hilly. Nearest village, Cambridge, population 1,727, 2½ miles distant, reached by highway. General surface, rolling and level. Nature of soil, good. Acres that can be used as meadow, 15; in timber, 15, oak, chestnut, some small pine. Acres tillable, 25. Fruit, apples, pears and cherries. Adapted to all crops. Fences, woven wire, good. House, 18x30, addition, 12x15; wood shed, 10x12, good condition. Outbuildings: barn, 14x16, additions of hay house, 10x15, shingle roof, recently painted; basement barn, 30x40, with slate roof; stable and open shed. Watered, house, by spring; barns, by spring; and fields, by spring. Occupied by owner. Price $2,000. Terms, easy. Address E. P. Hatch, owner, Cambridge, N. Y., Box 400.

TOWN OF EASTON

Population 4,321

No. 701.— Farm of 260 acres; located 2½ miles from Greenwich P. O. and railway station on line of Greenwich and Johnsonville branch of the D. & H. R. R.; 2½ miles from school and churches. Highways, state road. General surface of farm, level. Nature of soil, dark loam. Acres in meadow, 200; in pasture, 20; in timber, 20; acres tillable, 200. Fruit, for home use. Adapted to corn, oats, rye, potatoes and vegetables. House, 2 stories, good condition. Outbuildings: 2 large barns, 1 small one, good condition. House and barns watered by springs; fields, by Batten Kill, which forms north boundary of farm. Reason for selling, to close estate. Price, $7,000. Terms, reasonable. Address L. G. Thompson, owner, Greenwich, N. Y.

No. 702.— Farm of 220 acres; located 2½ miles from postoffice at Schuylerville; 2½ miles from railway station at Schuylerville, on line of B. & M. R. R.; 1 mile from school; 2½ miles from churches; 4 miles from butter and cheese factories; ½ mile from milk station. Highways, generally good. Nearest village, Schuylerville, population 1,711, distant 2½ miles, reached by highway. General surface of farm, level and rolling. Nature of soil, sand loam and clay loam. Acres that can be used as meadow, 85; acres now used as meadow, 50; in natural pasture, 25; in timber, 60, pine, oak and chestnut. Acres tillable, 100. Apple trees, 25. Adapted to all crops. Woven wire fences in fair condition. Two houses, story and half, roofed with slate and galvanized iron. Three barns, 40x30 ft.; sheds and stables connected, condition fair. House, barns and fields watered by springs. Farm borders Hudson River, now used as barge canal. Farm occupied by tenant. Reason for selling, old age. Price, $5,000. Terms, $2,500 down, balance on easy terms. Will rent. Address Nathan Corliss, 86 Woodlawn avenue, Saratoga Spa, N. Y.

TOWN OF GRANVILLE

Population 6,381

No. 703.— Farm of 130 acres; located 2 miles from postoffice at Middle Granville, R. D. No. 1; 2 miles from railway station at Middle Granville on line of D. & H. R. R.; 1 mile from school; 2 miles from churches and milk station; 4 miles from condensing plant. Good highways. Nearest village, Granville, population 3,890, distant 4 miles, reached by rail and highway. General surface of farm, rolling. Soil, mostly loam. Acres that can be used as meadow, 50; number now so used, about 40; in timber, about 25, mostly hardwood. Acres tillable, 60 or 70. Apple, pear, plum trees; grape vines. Adapted to oats, potatoes and corn. Stone wall and wire fences in good condition. House of 14 rooms. Large hay barn, cow stable, hen house, corn house, granary, all in good condition. Running water and cistern in house; barns watered by running water. Occupied by owner. Reason for selling, poor health. Price, $5,000. Fourteen cows on place. Address John C. Northrup, owner, Middle Granville, N. Y., R. F. D. 1, Box 60.

No. 704.— Farm of 106 acres; 1½ miles from Greenwich P. O., R. D. 5;

1½ miles from railway station at Greenwich on line of B. & M. R. R.; ¼ mile from school; 1½ miles from churches, butter and cheese factory and milk station. Highways, good. Nearest village, Greenwich, population 2,315, 1½ miles distant, reached by rail and highway. Surface, level and rolling. Soil, sand and clay loam. Acres in meadow, 25; natural pasture, 20; timber, 5, pine and hardwood; acres tillable, 90. Fruit, choicest kind, young trees, bearing 4 years. Best adapted to potatoes, corn, oats and rye. Fences, stone wall and wire, in good condition. Brick house, 48x36, 2 stories, slate roof, 4 cellars, woodshed attached. Outbuildings: 3 barns, 1, 30x40; 1 large cow barn, 1 new barn, holds 30 tons of hay; large ice house; carriage house, hog pen for 50 hogs; corn house, in good repair. Watered by wells, springs and cistern. Occupied by owner. There is a building that has been used for meat market which could be used as tenant house; also slaughter house suitable for barn. Reason for selling, poor health of owner. Price, $5,000. Terms, cash. Address O. S. Platt, owner, Greenwich, N. Y., R. D. 5. Will rent.

TOWN OF HEBRON

Population 1.356

No. 705.— Farm of 100 acres, 5 miles from West Hebron P. O., R. D. 2; 9 miles from railway station on line of D. & H. R. R.; 1 mile from school; 2½ miles from church; 1½ miles from butter factory and cheese factory; 8 miles from milk station. Highways, rolling but good. Nearest village, West Hebron, population 452, reached by highway. Surface of farm, rolling. Soil, slate and loam. Acres in meadow, 15; in timber, 20, hard wood, oak and chestnut; acres tillable, 60. Fruit, apples, plums, pears and grapes. Best adapted to potatoes, oats and rye. Fences, wire, rail and stone, good condition. House, 5 rooms, large pantry, clothes closet and hall. Outbuildings: new barn, 32x42, slate roof, basement. Watered, house by well; barns and fields, by springs. Land is worked on shares; house is not occupied. Reason for selling, owner has another farm. Price, $1,800. Terms, ⅓ cash. Address John A. Dennison, owner, Salem, N. Y.

No. 706.— Farm of 100 acres; located 3 miles from West Hebron P. O.; 10 miles from Salem, on line of D. & H. R. R.; 1 mile from school; 2 miles from churches; 1½ miles from cheese factory and 3 miles from milk station. Highways, good. General surface of farm, rolling. Nearest village, Salem, population 1,096, 10 miles distant, reached by highway. Nature of soil, loam. Acres now used as meadow, 50; in natural pasture, 40. Acres tillable, nearly all. Fruit, apples, pears, cherries, plums, grapes and currants Adapted to any crops. Fences, stone and wire, in fair condition. House, 30x40, with slate roof and flagged cellar bottom. Outbuildings: barn, 30x40, with slate roof; cow shed, 35x20, with stanchions for 20 head of cattle; horse barn, 40x30, and hog house, 20x25, all buildings slated. Watered, house by cistern and well. Unoccupied. Reason for selling, owner a widow. Price, $3,800. Terms, $2,000 cash, balance on mortgage. Address Mrs. Nancy W. Ashley, owner, West Hebron, N. Y.

TOWN OF JACKSON

Population 988

No. 707.— Farm of 115 acres; located 4 miles north of Cambridge village, on fine state road; 2 miles from railway station at Shushan, on line of D. & H. R. R.; ½ mile from school; 2 miles from churches; 4 miles from butter and cheese factory, milk station and condensing plant. Population of Cambridge, 1,727. General surface of farm, rolling, with a portion hilly. Altitude, 550 feet. Acres in meadow, 65; in pasture, 40; in timber 10. Acres tillable, 105. Soil is adapted to all crops grown in this latitude and especially for apples. Fruit, 450 apple trees, also pears, plums, cherries and small fruits. Fences, wire, in good condition. House 40x60, in fine state of repair, with modern improvements, beautifully located on elevation overlooking Lake Lauderdale, on which the farm has a considerable frontage. Outbuildings consist of cow barn, 40x60; horse barn, 40x35; stock shed and tool house, 40x20. Farm is watered by never-failing springs, from which water is piped to house and barns. A good income is realized during the summer season from lease of boats and accommodations to summer boarders. Reason for selling, owner has other business. Price, $8,000. Address William Balis, owner, Cambridge, N. Y. R. D. No. 1.

TOWN OF SALEM

Population 2,473

No. 708.— Farm of 198 acres; 4 miles from Shushan; R. D.; 4 miles from Salem. Good stock and grain farm. 10 acres timber. 1½-story house, 48x27, with wing, 16x30, very comfortable and in good repair. Two barns, 26x48; woodshed, 30x20, both good. ½ mile trout brook. Well watered and fenced. Price, $2,800. Terms, $1,500 cash, balance on mortgage. Address Patrick Hughes, owner, Shushan, N. Y., R. D.

WAYNE COUNTY

Area, 621 square miles. Population, 53,476. Annual precipitation, 41.36 inches. Annual mean temperature, 50°. Number of farms, 5,237. County seat, Lyons.

This is one of the north tier counties bordering on Lake Ontario and is drained by the Clyde River and Mud Creek, which unites with the Canandaigua outlet at Lyons.

The surface is rolling with long, low and parallel ridges running north and south. There are considerable woodlands of beech, ash, hickory, elm, oak, sugar maple and other trees covering about one-sixth of the county. Excellent building stone, iron ore and gypsum are found. The soil is of the same general nature as that of the other counties bordering on Lake Ontario, except that in the level strip along the lake, clay and gravelly loam appear in about equal quantities. In the eastern half of the county on both sides of and including the Clyde River Valley, black dirt with occasional areas of dark, gravelly loam is found. In the western half along the Mud Creek valley and south to the county line the soil is composed of sandy and gravelly loam. The crops reported are: corn, shelled, 532,536 bushels; wheat, 467,070 bushels; barley, 82,915 bushels; dry beans, 101,907 bushels; potatoes, 391,695 bushels; hay and forage, 90,176 tons. About 50,000 bushels of buckwheat and rye were also produced. The value of all farm property is $34,481,902, an increase in ten years since 1900 of 45.7 per cent. Domestic animals are reported as follows: dairy cows, 17,588; horses, 14,113; swine, 19,137; sheep, 10,897; poultry, 378,114; production of milk, 9,930,245 gallons valued at $875,893.

The county is traversed by the Erie (Barge) Canal, the New York Central and Hudson River; West Shore; Rome, Watertown and Ogdensburg, and Northern Central railroads. There are also electric lines extending in various directions throughout the county. Lyons, the principal city of this county, contains flour mills, distilleries, barrel manufactories and extensive beet sugar factories. Ample markets for everything produced in this county are near at hand in the cities of Rochester, Syracuse, Buffalo, etc.

There are 209 district schools in the county, 26 miles of state and county roads and 552 miles of other improved highways; 26 milk stations are conveniently located throughout the county. One Pomona grange; 20 subordinate granges; a fair association; a union agricultural society; county fire relief association; county agricultural society, county fruit growers' association and the Williamson Fruit Growers' Association constitute the different farmers' associations of the county.

TOWN OF BUTLER

Population 1,754

No. 709.— Farm of 108 acres; located 2 miles from South Butler P. O., R. D. No. 1; 5 miles from railway station at Wolcott, on line of R. W. & O. R. R.; ½ mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, good. General surface of farm, comparatively level. Altitude, 325 feet. Nature of soil, clay loam. Acres in natural pasture, 15; in timber, 10, beech, maple and basswood. Acres tillable, 95. Fruit, 300 apple trees, good varieties. Adapted to wheat, oats, corn, barley and hay. Fences, wire, good condition. 14-room house, in good condition. Barn, 80x40, lean-to, 16x30; new horse barn, 22x15; corn house; new poultry house, etc. House, watered by well; barns, by well; and fields by springs and well. Occupied by tenant. Reason for selling, ill health. Price, $7,500. Terms, $2,500 cash, remainder on mortgage at 5%. Will rent with option to buy. Address John Baldwin, owner, South Butler, N. Y.

TOWN OF GALEN

Population 4,648

No. 710.— Farm of 205 acres; located 4 miles from postoffice at Clyde, R. D. No. 3; 4 miles from railway station, on line of N. Y. C. & H. R. R. R.; ½ mile from school; 4 miles from churches, butter and cheese factories; ¼ mile from milk station. Highways, fair, some hills, 2 miles state road. Nearest village, Clyde, population 2,699, distant 4 miles. General surface of farm, rolling. Nature of soil, good loam. Twelve acres in timber, mostly hard beech and maple. Apples, 25 acres, and some small fruit. Adapted to any kind of farming or fruit. Fences in fair condition, mostly woven wire. House, 14 rooms, fair condition. Five barns, most of them, 30x40, fair condition. House and barns watered by wells; fields by springs. Now occupied by tenant. Reason for selling, to settle estate. Price, $9,000. Terms, all or part cash. There are great possibilities in this property. Address Ernest E. Finch, Exec., Clyde, N. Y.

No. 711.— Farm of 130 acres; located 2½ miles from postoffice at Clyde; 2½ miles from railway station at Clyde, on line of N. Y. C. R. R. and W. S. R. R.; ¼ mile from school; 2½ miles from churches and butter factory. Highways, good level macadam. Nearest village, Clyde, population 2,699, distant 2½ miles, reached by highway. General surface of farm, rolling. Nature of soil, gravel and loam. Acres that can be used as meadow, 45; in natural pasture, 3; in timber, 3, second growth, mostly elm, ash and maple. Acres tillable, 127. Fourteen acres of apple orchard bearing, 13 acres set out 4 years; 25 young cherry trees beginning to bear; 30 pear trees, 10 peach, 7 plum, 5 walnut trees. Adapted to all state grains, alfalfa and fruit. Mostly wire fences, some rail, in good condition. Brick house with 13 rooms, condition good. Barn, 70x40; horse stable, 30x30; new tool shed, 32x20; milk house, 8x12; hog pen, 20x14; hen house, 12x14; corn crib, 8x18. House and barns watered by wells; fields by brooks and well. Sodus Bay and Lake Ontario about 9 miles distant. Now occupied by tenant. Reason for selling, poor health. Price, $13,000. Terms reasonable, price including 7 cows and bull. House has inside toilet and furnace. Address William Hannett, 316 Plum street, Syracuse, N. Y.

TOWN OF HURON

Population 1,681

No. 712.— Farm of 200 acres; located 2½ miles from North Rose P. O., R. D. No. 1, and railway station, on line of R. W. & O. division of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches; 5 miles from butter factory; 3 miles from cheese factory and 2½ miles from milk station. Highways, good. Surface, rolling. Altitude, 600 feet. Soil, clay loam. Acres that can be used as meadow, 125; in natural pasture, 15; in timber, 15, chestnut. Acres tillable, 170. Fruit, 1,000 apple and 100 pear trees, all varieties. Adapted to all crops. Fences, wire, good condition. 25-room house; cellar under all, steam heat, in good condition. Outbuildings: barns, 40x100, 20x35, 30x40; tool shed, 20x40; new silo; hog pen, 10x15, all newly painted; concrete floors. Also 8-room tenant house. Number of acres of muck land. House watered by well, barns by well, and fields by well and streams. Occupied by owners. Price, $25,000. Terms, $5,000 cash, balance on easy terms. Address Bridger & West, owners, Alton, N. Y.

TOWN OF MACEDON

Population 2,483

No. 713.— Farm of 80 acres; located 3 miles from Macedon P. O.; 4 miles from railway station at Palmyra, on line of N. Y. C. & H. R. R. R.; 1 mile from school; 3 miles from churches and milk station. Good gravel highways. Nearest village, Palmyra, population 2,469. General surface of farm, rolling and level. Nature of soil, gravel, sand and loam. Acres in timber, 10, cedar, elm, beech. Number tillable, 50. Enough fruit for home use. Adapted to grain, beans, potatoes, hay. Wire and rail fences in fair condition. Large old-fashioned house. New large barn in fine condition. House and barn watered by wells; fields by springs. Now occupied by owner. Reason for selling, poor health. Price, $5,800. Terms, $2,000 cash, balance at 5%. Address Ivan Erway, owner, Palmyra, N. Y., R. D.

No. 714.— Farm of 60 acres; located 3 miles from Macedon P. O.; 4 miles from railway station at Macedon, on line of N. Y. C. R. R.; 1 mile from school; 3 miles from churches. Good gravel highways. Nearest village, Macedon, population 1,147, distant 3 miles, reached by highway. General surface of farm, level. Nature of soil, loam and gravel. Acres that can be used as meadow, 40. Number tillable, all. Enough fruit for family use. Adapted to all kinds of crops. Wire fences in fair condition. Large house in good condition. Large barns in fine condition. House and barns watered by wells; fields by stream. Now occupied by owner. Price, $7,500. Terms, $2,000 cash, balance 5%. Address Otis Peas, Macedon, N. Y.

No. 715.— Farm of 87 acres; located 3 miles from Macedon P. O.; 3 miles from railway station at Macedon; ½ mile from school; 3 miles from churches. Gravel highways. Nearest village, Macedon, population 1,147, distant 3 miles, reached by trolley or highway. General surface of farm, level. Nature of soil, sandy loam. Eight acres of apples. Adapted to all kinds of crops. Good fences. Eight-room house in good condition. Large barns in good condition. House and barns watered by wells; fields by spring. Now occupied by tenant. Reason for selling, old age. Price, $11,000. Terms, $5,500 down. Address Earl Servoss, Macedon, N. Y.

No. 716.— Farm of 80 acres; located 3 miles from Macedon P. O.; 4 miles from railway station at Macedon, on line of N. Y. C. R. R.; ½ mile from school; 3 miles from churches. Nature of highways, good gravel. Nearest village, Macedon, population 1,147, distant 3 miles, reached by highway. Surface of farm, rolling. Nature of soil, loam and muck. All land tillable. Enough fruit for home use. Adapted to grain, potatoes and muck crops. Fences in fair condition. House of 8 rooms, in fair condition. Barns in fair condition. House and barns watered by wells; fields by springs. Now occupied by owner. Reason for selling, other business. Price, $7,500. Terms, $4,000 cash. Address Charles Van Scott, owner, Macedon, N. Y.

TOWN OF SODUS

Population 5,757

No. 717.— Farm of 200 acres; located 1 mile from Alton P. O., R. D. 1 and railway station on line of N. Y. C. R. R.; ½ mile from school; 1 mile from churches; 6 miles from butter and cheese factory and milk station. Highways, state road. Nearest village, Lyons, 5 miles distant, population 4,742, reached by rail or highway. General surface of farm, level. Acres in meadow, 100; in timber, 10, hard and soft wood; acres tillable, 175. Fruit, 10 acres of young orchard. Best adapted to stock raising. Fences, wire, in fair condition. New silo. House and barns watered by wells; fields, by running water. Occupied by tenant. Price, $10,000. Terms, easy. Address Christopher Gatchell, owner, Alton, N. Y.

No. 718.— Farm of 27 acres; located 1 mile from Sodus P. O., R. D. No. 2; 1½ miles from railway station at Sodus on line of R. W. & O. and N. Y. C. R. Rs.; ½ mile from trolley line, high school and churches. Highways, good improved road. Nearest city, Rochester, population 248,465, 30 miles distant, reached by highway and rail. General surface, level. Nature of soil, sandy loam. Acres in natural pasture, 2; in timber, 4, beech, maple and ash. Acres tillable, 3. Fruit, 210 apple, 200 quince, 40 plum, 180 peach, 380 pear, and 275 cherry trees. Adapted to fruit. Fences, good. 8-room house, in good condition. 2 barns, 30x60; 2 other buildings, 16x28 and 14x20, fair condition. Watered, house, by well; barns, by well; and fields by spring. Lake Ontario, 3 miles distant. Reason for selling, other business. Price, $12,000. Terms, cash. This farm has a good equipped dry house, 3 acres of berries and 2 acres of good muck land. Address John C. Deneef, owner, Sodus, N. Y.

No. 719.— Farm of 15 acres; located 3 miles from Sodus P. O., R. D. No. 4; 1 mile from railway station at Sodus Point, on line of Pennsylvania R. R.; 1 mile from school and churches. Good highways. Nearest village, Sodus, distant 3 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 550 feet. Nature of soil, sandy loam. Acres tillable, 15. About 13 acres of apples, old and young trees; 34 large sour cherry trees, 3 white oxheart; 12 pear trees; 60 peach trees; 3 plum trees; also currants and other small fruit. Best adapted to fruit, and is an ideal poultry farm. All necessary fences. Modern bungalow, 9 rooms, oak floors, hot water heat, bath and toilet, storm windows; in fine condition. Barn, 16x42, painted, in good condition; garage; hen house, 24x66, new, painted, with basement, 20x30 ft. House and barn watered by well. Lake Ontario and Great Sodus

Bay 1 mile distant. Rochester and Sodus Bay trolley passes the farm; 3 miles to Wallington, on line of R. W. & O. R. R. and Pennsylvania Division. Farm now occupied by owner. Reason for selling, old age. Price, $7,500. Terms, about $4,000 cash, balance 5%. Address Howard C. Pratt, Sodus, N. Y., R. D. 4.

TOWN OF WOLCOTT

Population 3,261

No. 720.— Farm of 55 acres; 2 miles from Fair Haven P. O., R. D. 5, on L. V. R. R.; 4½ miles from railway station at Red Creek on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 2 miles from shipping station; 4½ miles from cheese factory. Highways, fair. Nearest city, Oswego, population 25,426, 16 miles distant, reached by rail. Surface, rolling and hilly. Soil, clay loam and gravel. Acres in meadow, 12; natural pasture, 7; timber, 4, beech and maple; acres tillable, 50. Fruit, 100 apple, 90 pear, 12 peach, 6 plum, 4 prune trees, cherries, quinces and grapes. Adapted to wheat, oats, corn, potatoes and hay. Fences, wire and rail, good condition. House, 9 rooms, furnace, first-class condition, and woodhouse. Outbuildings: main barn, almost new, with basement, 30x55; new wagon house, 18x30; concrete floors in all barns; poultry house, 15x75; silo. Watered by well, spring and creek. Farm is 1 mile from Lake Ontario. Occupied by owner. Price asked is about what buildings cost. Price, $100 per acre. Terms, ½ down, balance on mortgage. Address F. L. Mixer, owner, Red Creek, N. Y.

WESTCHESTER COUNTY

Area, 463 square miles. Population, 321,713. Annual precipitation, 54.26 inches. Annual mean temperature, 50.1°. Number of farms, 1,880. County seat, White Plains.

This county is located in the southeastern part of the state and borders on Connecticut. It is bounded on the west by the Hudson River, on the southeast by Long Island Sound, is intersected by the Croton River and is drained in part by the Bronx River.

The surface is generally hilly. There are found several quarries of choice white marble and also quarries of dolomite (magnesium limestone). The soil is fertile and adapted to pasturage. It consists chiefly of slaty, sandy and gravelly loam. Crops reported are: corn, shelled, 71,243 bushels; oats, 49,814 bushels; rye, 13,780 bushels; potatoes, 104,555 bushels; hay and forage, 27,676 tons; value of all farm property, $66,156,044, an increase of 117 per cent. during the past ten years. The average price of improved land in this county is $434.73 an acre. Domestic animals reported are as follows: dairy cows, 8,755; horses, 4,999; swine, 5,603; sheep, 1,558; poultry, 224,617; milk produced, 6,942,345 gallons; total receipts from the sale of dairy products, $765,727.

The county is intersected by the New York, New Haven and Hartford; New York Central, and Harlem and Putnam branch railroads. Many residents of New York City have beautiful villas and country seats in this county. It contains the city of Yonkers and the large villages of Peekskill, Ossining and White Plains. The southern part of the county comprising the populous villages of West Farms, Kings Bridge, Morrisania was annexed to New York City some years ago. White Plains is only 22 miles from the Grand Central Depot, New York City, and contains Alexander Institute which has more than a local reputation. Several celebrated academic and military high schools are located in this county and there are 122 district schools. There is but one creamery in the county as most of the milk produced is shipped directly to New York City. Agricultural societies of the county are represented by a co-operative association, 2 granges, a farmers' club, a horticultural society, and a county agricultural society.

TOWN OF YORKTOWN

Population 2,431

No. 721.— Farm of 175 acres; located 1 mile from P. O.; 3 miles from railway station at Yorktown, on line of N. Y. C. R. R., Putnam Division; 1 mile from school and churches and 3 miles from milk station. Highways, state and dirt roads. Nearest village, Peekskill, population 15,502, 6 miles distant, reached by highway. General surface, rolling. Altitude, 800 feet. Nature of soil, loam. Acres that can be used as

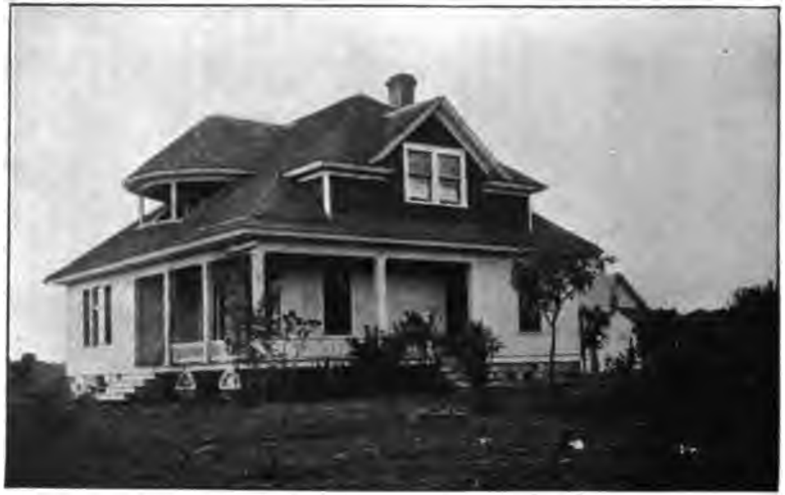


FIG. 78.— HOUSE ON FARM NO. 719, TOWN OF SODUS, WAYNE COUNTY.

meadow, 100; in natural pasture, 50; in timber, 25, hardwood, oak and hickory. Fruit, apples, pears, plums and quinces. Acres tillable, 100. Adapted to vegetables, grains and hay. Fences, stone and rail, fair condition. 15-room house, good condition. **Outbuildings:** cow barn, horse barn, ice house, granary, pig house and carriage house. Watered, house, by cistern and well; barns, by well; and fields, by brook and springs. Occupied by tenant. Reason for selling, wish to retire. Price, $20,000. Terms, easy. Address I. W. Winterburn, 104 Riverside Drive, New York, N. Y.

No. 722.— Farm of 130 acres; located 2½ miles from Yorktown Heights on line of N. Y. C. R. R., Putnam Division; 1 mile from school; 2 miles from churches and 2½ miles from milk station. Highways, state road. Nearest village, Peekskill, population 15,502, 6 miles distant, reached by highway. General surface, rolling. Nature of soil, rich loam. Acres that can be used as meadow, 65; in timber, 4, hardwood. Acres tillable, 75. Fruit, apples, pears, peaches and plums. Adapted to corn, wheat, oats and potatoes. Fences, stone, in fair condition. House, 12 rooms, in good condition. **Outbuildings:** dairy barn for 20 cows, carriage house, hay barn, ice house and poultry house. Watered, house, by well and cistern; barns, by well; and fields, by springs. Occupied by owner's son. Reason for selling, poor health. Price, $19,000. Terms: part cash. Address George B. Fowler, owner, Yorktown Heights, N. Y.

WYOMING COUNTY

Area, 606 square miles. Population, 33,028. Annual precipitation, 48.32 inches. Annual mean temperature, 46.6°. Number of farms, 3,529. County seat, Warsaw.

This county is situated in the western part of the state, is drained by Allen, Cattaraugus and Tonawanda Creeks.

The surface is rolling and quite extensively covered with woodland. Devonian sandstone and shale underlie a large part of this county and extensive salt beds are also found. In the southern part of the county, the soil on the upland is gravelly loam and heavy clay; in the valleys, a gravelly loam is found which is excellent for pasturage. In the northern part a heavy clay and gravelly loam resting on limestone predominates. Crops reported are as follows: corn, shelled, 32,817 bushels; oats, 992,257 bushels; wheat, 318,720 bushels; buckwheat, 87,192 bushels; dry beans, 211,540 bushels; potatoes, 580,138 bushels; hay and forage, 110,094 tons. The average price of farm land per acre is $28.99, an increase of $5.59 per acre in ten years. Domestic animals are dairy cows, 26,406; horses, 11,608; swine, 11,972; sheep, 16,659; poultry, 200,718; milk produced, 14,033,000 gallons, the sale of which amounted to $1,340,704. In the southeast corner of the county, the Genesee River flows between perpendicular cliffs 350 feet high. There are several picturesque cataracts known as the Falls of Genesee, one of which is 110 feet in height.

The county is crossed by the Erie; Buffalo, Rochester and Pittsburg, and the Batavia, Attica and Arcade railroads and is connected with Rochester by the Genesee Valley Canal. Cheap, easy and quick transportation to the great markets of Buffalo and Rochester show the advantages of this location. A union school located at Warsaw and a collegiate institute located at Attica with graded schools in villages and 168 district schools place the county high among the counties of the state educationally. There are 36 milk stations and factories in the county; 23 miles of state and county roads and 806 miles of graded and improved highways. The agricultural organizations are 2 fair societies, 12 granges and a Pomona grange.

TOWN OF ARCADE

Population 2,479

No. 723.— Farm of 35½ acres; located 2 miles from Chafee P. O. and railway station on line of Pa. R. R.; 1 mile from school; 2 miles from churches, cheese factory and milk station. Highways, good. Acres tillable, all. Fruit, apples, plums and cherries. Fences, wire, good. House recently remodeled, 9 rooms. 2 barns, in fair condition. Watered, house, by pump; fields, by creek. Occupied by owner. Reason for selling, ill health. Price, $3,000. Full particulars given upon application to A. J. Crannell, owner, Chafee, Erie Co., N. Y.

TOWN OF EAGLE

Population 1,189

No. 724.— Farm of 220 acres; located 4 miles from Bliss P. O., R. D. No. 2

and railway station on line of B. R. & P. R. R.; ¼ mile from school; 2 miles from churches and butter and cheese factory; 2½ miles from condensing plant. Nearest large village, Warsaw, population 3,424, 14 miles distant, reached by rail or highway. General surface, level. Altitude, 1,800 feet. Acres in meadow, 100; in pasture, 45; in timber, 75, beech, maple and hemlock. Fruit, for home use. Best adapted to beans, hay and grain. Fences, mostly wire, in good condition. House, double, good condition. Outbuildings: barn, large gambrel roof, with silo, large poultry house and hog house. House watered by well and cistern; fields by springs. Occupied by owner. Reason for selling, other business. Price, $35 per acre. Terms, $3,000 cash, balance at 5%. Address W. B. Kerr, owner, Pike, N. Y.

TOWN OF GENESEE FALLS

Population 615

No. 725.— Farm of 174 acres; located 2½ miles from Castile P. O., R. D. 3; 2 miles from South Castile railway station on line of Erie R. R.; 3 miles from churches; 80 rods from school; 2 miles from cheese factory. Nearest large village, Warsaw, population 3,424, 12 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,200 feet. Good soil. Acres in meadow, 30; in natural pasture, 10; in timber, about 30, beech, maple, hemlock, chestnut and pine. Nearly all tillable. Fruit, apples. Adapted to wheat, oats, buckwheat, beans, potatoes, etc. Fences, mostly wire. House, upright, 2 stories, wing, 1½ stories. Outbuildings: large barn, 30x85, nearly new, with carriage house, 16x26; cow stable, 18x32. Watered by spring and brook. Occupied by owner. Price, $85 per acre. Terms, one-half or more down, remainder on mortgage. Address Miss Mary L. Smith, owner, Castile, N. Y., R. D. 3.

TOWN OF WETHERSFIELD

Population 895

No. 726.— Farm of 144 acres; located 5 miles from Bliss P. O., R. D. No. 2 and railway station on line of B. R. & P. R. R.; ½ mile from school; ½ mile from churches; 2 miles from butter and cheese factory; 5 miles from milk station and condensing plant. Highways, state road, ½ mile distant. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; now used as meadow, 20; in natural pasture, 27; in timber, 40, maple, beech, basswood and cherry. Acres tillable, 75. Fruit, apples and pears, very little. Adapted to grain, potatoes, beans and hay. Fences, good. 7-room house, good condition. Outbuildings: gambrel roof barn, 40x60, with basement; silo, concrete floor, with patent stanchions. Watered, house, by well; barns, by spring; and fields, by spring. Occupied by tenant. Reason for selling, to settle an estate. Price $4,500. Terms, $2,000 cash, balance on mortgage. Address Fred B. Luce, owner, Johnsburg, N. Y.

YATES COUNTY

Area, 340 square miles. Population, 18,841. Annual precipitation, 31.75 inches. Annual mean temperature, 46.8°. Number of farms, 2,288. Average value of farm lands per acre, $66.03. County seat, Penn Yan.

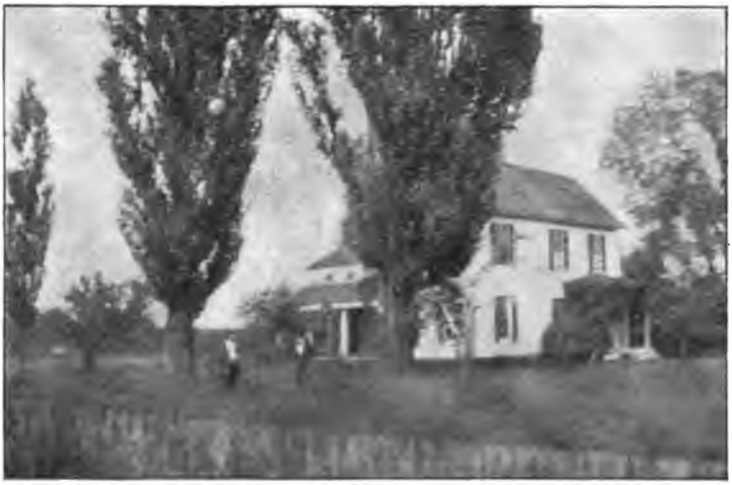
This county is located in the west central part of the state, in the "Finger Lake" district. Seneca Lake forms its eastern boundary, Canandaigua Lake part of its western, and Lake Keuka partly intersects it from the south.

The main surface feature of the county is a series of five gently sloping ridges running north and south.

The soil consists of a fine quality of gravelly loam intermixed with clay and the disintegrated shales of the Portage group, and is particularly well adapted to pasturage, tillage or fruit growing. Among the valuable rocks that underlie the soil are Portage sandstone and Tully limestone. The county is well watered by streams, springs, lakes and ponds.

Ash, beech, elm, hickory, oak and maple are the leading trees of the woodlands.

Domestic animals are reported on 2,139 farms as follows: dairy cows, 5,035; horses, 6,515; swine, 18,076; sheep, 25,001; poultry, 138,040. The number of farms reporting dairy cows was 1,907 and their total production of milk was 2,677,246 gallons. Total receipts from the sale of dairy products was $156,044.



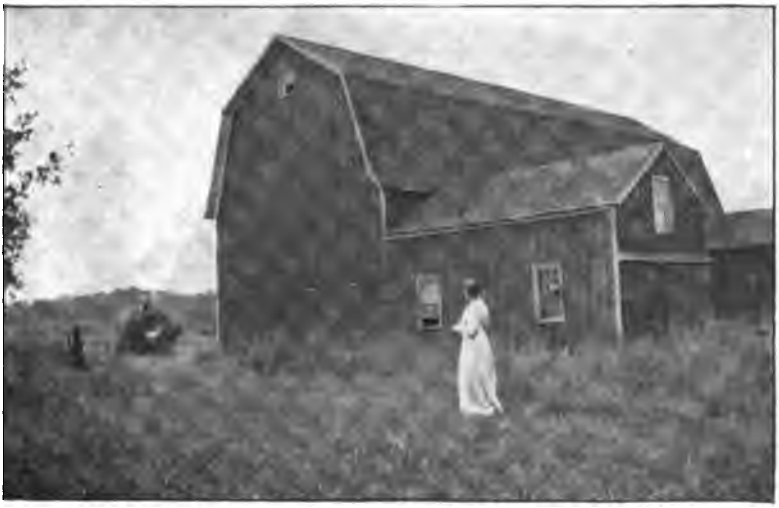


Fig. 79.— Buildings on Farm No. 725, Town of Genesee Falls, Wyoming County.

Yates is the second grape and wine producing county in the state. The first champagne produced in the United States was made in Yates County and this industry has steadily progressed until to-day it exceeds any other county in the United States in this production. The county is well equipped with transportation facilities, good roads, steam and electric lines. Buffalo, Philadelphia, New York, Syracuse, Rochester and other centers of population afford ample markets outside the county for all products of farm, garden, orchard and vineyard.

Educational advantages are of the best, there being, in addition to the many graded, high and academic schools, 104 school districts in the county.

Agricultural organizations consist of a county fair association, Yates County Agricultural Society and nine granges.

TOWN OF JERUSALEM

Population 2,424

No. 727.— Farm of 46 acres; 1½ miles from Keuka Park; 6 miles from railway station at Penn Yan on line of N. Y. C. R. R. Nearest large village, Penn Yan, population 4,725, distant 5 miles. Highways, first class. Acres in meadow, 2; acres tillable, 43; acres in natural pasture, 3; acres timber, 3. Fruit, 24 acres of grapes in bearing; 8 acres, 7 and 8 year old grapes in bearing; 5 acres peaches; 2 acres plums, all in fine condition. Occupied by owner. Fences around pasture. House, 2 stories, 30x40, in fair condition. Outbuildings: barn, 20x30, in fair condition; ice house and poultry house. Watered, house, by well and cistern; barns, by spring. This farm is located on lakeside with frontage of 1,500 feet on lake shore and within 1½ miles of Keuka College. Reason for selling, advanced age of owner. There are several cottage sites on the lake shore. For price and terms, address R. F. Scofield, owner, Penn Yan, N. Y.

TOWN OF MIDDLESEX

Population 1,133

No. 728.— Farm of 124 acres; located ½ mile from Rushville P. O., R. D. 23, and railway station on line of Lehigh Valley Ry.; 1 mile from school and churches. Highways, good. Surface of farm, part level and part rolling. Altitude, 670 feet. Soil, clay loam, some gravel. Acres in meadow, 20; in alfalfa, 25. All tillable. Fruit, apples, 125 trees. Adapted to corn, beans, wheat, barley, hay, oats, alfalfa, etc. Fences, woven wire, good condition. House, 12 rooms, good condition. Outbuildings: barn, 32x100; barn, 34x84; poultry house; new hog house, etc. Watered by well, spring and creek, piped to barn and house. Occupied by owner. Reason for selling, ill health. Price, $14,000. Terms, one-third cash, balance on bond and mortgage at 5%. Address Wm. H. Savage, owner, Rushville, N. Y. There is a natural gas well on farm, which furnishes light and heat, under full control of owner.

TOWN OF STARKEY

Population, 2,656

No. 729.— Farm of 64 acres; located 4¾ miles from Dundee P. O., on line of N. Y. C. R. R.; 1 mile from school and 4¾ miles from churches, cheese factory and condensing plant. Highways, state road. Nearest village, Dundee, population 1,236, 4¾ miles distant, reached by highway. General surface, sloping. Altitude, 1,000 feet. Nature of soil, clay loam and muck. Acres that can be used as meadow, any part: in natural pasture, 2; in timber, 6, maple, beech, oak, basswood and pine. Fruit, about 90 apple trees and 1½ acres of black raspberries. Adapted to beans, hay, raspberries and wheat. Fences, mostly woven wire. House, 8 rooms, in good condition. Outbuildings: barn, 36x60, built in 1912; concrete floor in cow and horse stables, hog house and poultry house. Watered, house and barns, by well. Occupied by tenant. Reason for selling, other business. Price, $4,800. Terms, $2,000 cash and remainder on mortgage. Address J. M. Ovenshire, owner, Dundee, N. Y.

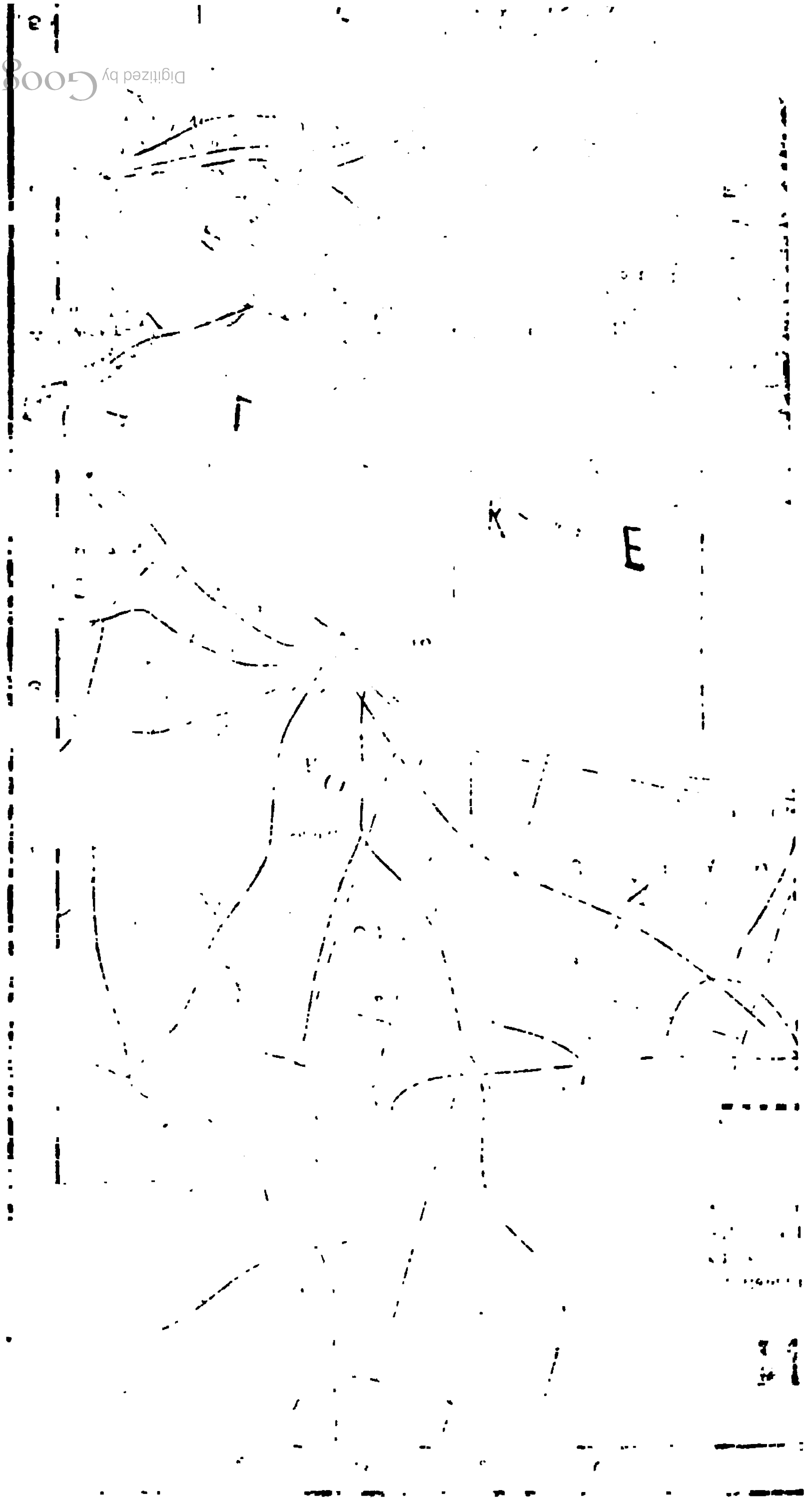
TOWN OF TORREY

Population 1,070

No. 730.— Farm of 228 acres; located 1 mile from postoffice at Dresden, R. D. No. 1, on line of Pennsylvania Division of N. Y. C. R. R.; 1 mile from school and churches. Nearest city, Geneva, population 13,232, distant 14 miles, reached by rail and highway; and 7 miles from large village. General surface of farm, level; gentle slope to some of the fields. Nature of soil, clay loam. Acres now used as meadow, 75; in natural pasture, 9; in timber, 30, hickory, white oak, elm.

Acres tillable, 200. Apple orchard 4 years old, 16 acres. Adapted to hay, alfalfa, wheat, beans, corn, etc. Some wire fences on place. Large old-fashioned frame house, expensively built. Large frame barn, steel roof, 80x40; tool shed; chicken house. House and barn watered by wells; fields by stream. Farm overlooks Seneca Lake, being a mile from the west shore. Farm now occupied by tenants. Reason for selling, other business. Price, $12,000. Mortgage of $7,400 to be assumed, balance in cash. Will rent until sold for cash or on shares to right person. This farm is one of the most beautiful sites on Seneca Lake. Address William E. Sill, 24 South Hawk street, Albany, N. Y.

EW YORK,
O N T A R I O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